# THE LANCET.

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# An Address
ON
# THE EDUCATION OF THE STUDENT OF MEDICINE.

*Delivered at the Opening of the Winter Session (1910–11) in the Medical Department of the University of Leeds,*

BY F. HOWARD MARSH, M.A., M.C. CANTAB., F.R.C.S. ENG.,

MASTER OF DOWNING COLLEGE, AND PROFESSOR OF SURGERY IN THE UNIVERSITY OF CAMBRIDGE.

MR. VICE-CHANCELLOR, LADIES, AND GENTLEMEN,—I am aware that I am standing in a position of much responsibility. But when your Council did me the honour of inviting me to present the prizes and give the introductory address to-day I felt that I ought not to decline. Duty must be done. But there was a consideration that at once presented itself to my mind which made the task I was undertaking thoroughly congenial. I remembered that I should be speaking in Leeds, where one of the most interesting and worthy of the men whose names stand clearly inscribed on the pages of the history of our profession lived and worked, and where his successors have made the medical department of the University of Leeds a foremost centre for the cultivation of the science and art of surgery.

## WILLIAM HEY.

The seniors among you must be familiar with all, and with much more than I can tell about William Hey, but in speaking to the young pilgrim warriors who set out to-day, I wish, as one who has borne the burden and heat of the journey, to tell what I seem to have learned, and the conclusions which I have formed touching those things about which, when the time for a retrospect shall come, there may be as much as possible to remember with satisfaction, and as little as possible to regret. And for this purpose the life and personality of William Hey furnish me with a most suitable text. Even advanced students know Hey only as the inventor of a saw which is never used, and an operation which is never performed. Let me try to say more than this about him.

Hey was one of three brothers, each of whom attained high distinction. John, the eldest, born 1734, came up to Cambridge, was eighth wrangler, and, later, a Fellow and Tutor at Sidney-Sussex College. In 1780 he was elected as the first Norrisian Professor of Divinity, and William Pitt attended his lectures on morality—a training of much value to a politician, as we shall all no doubt agree, not only in Pitt's time but at the present day. John became a Doctor of Divinity, and wrote several treatises, which went through three editions. To this day he is high on the list of Cambridge worthies.

Richard was also a Cambridge man. He was third wrangler and won the Chancellor's medal in mathematics in 1768, became a Fellow and Tutor at Magdalene, and Esquire Bedell, and took the degree of LL.D. He wrote three dissertations—on the pernicious effects of gaming, on duelling, and on suicide, for each of which he received £50 through the University from an anonymous donor. These essays, after the manner of the time, were compositions in which the subjects were elaborately worked out under a number of heads, and from every point of view. They display much ingenuity and close argument, and are written in a clear, copious, and robust style. He shows not only that these things are wrong in every aspect in which they can be regarded, but that they are foolish and indeed contemptible. It seems certain that no one who reads them with an open mind will ever game, fight a duel, or commit suicide again. He also wrote a novel. Richard Hey was the kind of man one would have much liked to know. His conversation must have been interesting and entertaining. He attained the ripe age of 91.

Your William Hey, born in 1736, had from the first a single eye to his profession, for he lost his right eye when he was four years old. This must have been a heavy handicap, but the calamity was diminished by the circumstance that it occurred in infancy, so that the eye which was left had time to prepare itself for its heavy responsibilities. This is not the occasion for alluding to Hey's individual contributions to surgery: their value is well known in Leeds and widely recognised elsewhere. But of the man himself, I should like to offer some estimate for which our business to-day affords ample justification. After having been a student at St. George's Hospital, he came at once to Leeds, and was soon engaged in active practice. He was brought in contact with that extraordinary man, Joseph Priestley, the discoverer of oxygen, who had become in 1767 Presbyterian minister of Mill Hill Chapel in your town, and through him he was elected a Fellow of the Royal Society in 1775. In 1767 Hey was prime mover in founding the Leeds Infirmary, where afterwards he was senior surgeon for 39 years—from 1773 to 1812. He was twice Mayor of Leeds. In this office he so vigorously denounced vice and profanity that the populace burnt him in effigy, and threatened him with personal violence. He was a skilled musician, and for some time President of the Leeds Literary and Philosophical Society. He was a sound patriot, for he had 11 children. He died at the age of 83, in 1819. His works published in 1810 are written in language which is so clear, direct, graphic, and vigorous, that to this day it is a genuine pleasure to read pure English turned to so good an account. He owed the respect in which he was held for so many years, not only to his ability and culture—these indeed never suffice—but to his honourable and high character. He may be taken as an example of the man whom Horace, in one of the gems of classic literature, has pictured in the lines which he addressed to Aristius Fuscus, and which every young man would do well to bear in mind:—

> "Integer vitæ scelerisque purus
> Non eget Mauris jaculis, neque arcu
> Nec venenatis gravida sagittis
> Fusce, pharetra."

Of these lines Sharp has given the following translation:—"Fuscus, he who hath integrity of life and is free from wickedness needs not Moorish javelins, nor bow, nor a quiver laden with poisoned arrows." For (he adds) in the Sabine wood a wolf fled me, though unarmed.

We must without hesitation assign to Hey a place on the list of those who have left great names in English surgery, beginning with Richard Wiseman, and coming down to the most renowned amongst them all, Lord Lister. Reckoning that a surgeon is at his prime at the age of 50, we may, I think, take the following names and dates as correct: Wiseman 1672, Cheselden 1738, Pott 1764, Hunter 1778, Hey 1786, Astley Cooper 1818, Lawrence 1833, Syme 1849, Paget 1864, Lister 1877. To be one of ten worthies distributed over a period of 205 years is assuredly no mean distinction. With Hey before him no Leeds man can, if he fails or goes astray, plead the want of a high ideal that he might have followed.

It must, I think, be interesting at the present day to recall for a moment who our predecessors have been, and the conditions under which they worked. What were the qualities which brought these ten men, each in his generation, into the first place, and set them apart—*longo intervallo*—from the rest who, though good men in their day, have now sunk deep into the forest shade?

First of all they were men of originality and enterprise. It could not be said of them that—

> "With packhorse constancy they kept the road
> True to the jingling of their leaders' bells."

They were leaders, not followers. They were genuine students, who aimed at advancing and improving the surgery of their day without the low ambition of personal notoriety, or over much financial success. Wiseman, Astley Cooper, and Lawrence were the handsome men of the group; Cheselden, Hey, and Lawrence probably the best read and most accomplished. Others were from the first so absorbed in the work immediately before them that they had no time to wander in the shady groves of the *Academia vetus* and listen to the teaching of Plato. They picked up their own sterling philosophy, and acquired not sham but real culture as they went along. Many a fop and many a prig in philosophy or the fine arts would have found his true level with, for instance, Sir James Paget, whose society was sought by the most cultured people of his day. Hunter had no accomplishments, nor did he desire them; at least we know, from what occurred at Oxford, that an academic career had no attractions for him.

It is often asked how the early surgeons could have

operated without anæsthetics. That they did so is claimed by the ignorant and uncharitable as a proof that they were callous and brutal. It is easy to prefer such charges against the pioneers of what surgery has now become, or for the anti-vivisectionists of our time to bring accusations against such benefactors of mankind as Paget and Lister. The truth is they know not what they say. History will assign to them their proper place when the day of reckoning comes. But to those who, in good faith and Christian charity, ask how these things could be done the answer is that the old surgeons were impelled by what they witnessed of the sufferings caused by disease—and of which we of to-day can have only a faint conception—to find, if possible, some means of relief; that they attained in many instances a reassuring and encouraging measure of success; and that they were well aware that they were laying stepping-stones which their happier successors should tread.

William Hey, junior, was, like his father, a man of ability and culture. He will be remembered chiefly for his treatise on puerperal fever. Of him and of the able and conscientious men who were associated with him in the study of this dread disease, which played such havoc in Leeds and its neighbourhood in 1809 to 1812, we can only say that the time was not yet. They could only study results, and all their efforts to understand the nature of the disease were null and void, and their best attempts at treatment can now only affright, and fill us with distress. The case is but another example of the truth that great discoveries—that is, excursions into the hitherto unknown—must wait till the agency through which alone they become possible has been provided. Without wings, however keen the gaze, the point-to-point flight cannot be made. It was so with William Hey, junior, and his colleagues. The main questions around which their discussion circled were whether the disease was, or was not, infective; then, if it was, how did it arise. The search was close and earnest, but it was foredoomed to failure. Something was wanting before the riddle could be solved. How often on like occasions has that something been a contribution from one of the other sciences—in astronomy, a telescope or a photographic plate; in pathology, a microscope or an X ray picture; in physiology, an electric current or a chemical agent such as chloroform? In the instance before us matters had to wait for another 60 years, until the microscope was so far perfected as to furnish the means for new methods of research, and to render Pasteur's investigations possible. After that Lister could follow the same lines of close observation and reflection which Hey and his contemporaries had pursued, and was able to succeed where they had failed, and so the tremendous event, the discovery of the nature of infection in surgical practice, was attained.

Does not all this remind us that there can be no partition walls in the field of intellectual progress; that all the sciences are but parts of one stupendous whole—

> "Children of divers kind
> We, sucking on earth's natural bosom, find,
> Many for many virtues excellent,
> None but for some, and yet all different."

Many dialects, yet a common language. May not the devotees of science well exclaim with the Galileans, How hear we every man in our tongue wherein we were born? Parthians and Medes and Elamites—and the rest—we do hear them speak in our own tongues the wonderful works of God. Are we not, indeed, come we whence we may, pilgrims travelling to the same shrine, where the cry is still, as it was with Goethe—"Light, more light!" and where we hear, ever in clearer and clearer tones, the responsive mandate, "Let there *be* Light."

## PRESENT POSITION OF MEDICAL EDUCATION.

I now turn to the present position of medical education, and I think that even a cursory examination of this supremely important question must give rise to serious misgivings. As medicine has now become a department of biology, its pursuit necessarily demands a sound acquaintance with the broad principles of those departments of biological science with which it is intimately connected, which are, in fact, the foundations on which it rests—chemistry, anatomy, physiology, and pathology. Here are four sciences each of which has a horizon to which no limit can be assigned, and which is constantly undergoing expansion. Every year, to their honour be it said, the pioneers of all of these sciences are forging ahead and initiating new methods of investigation, so that the work is always increasing in novelty, complexity, and quantity. Moreover, things are at first seen, as it were, through a glass darkly, and new facts cannot at once have their proper places allotted to them, or be brought into harmonious relation with their environment. They are therefore difficult to teach, and infinitely more difficult to learn. In other words, in the borderland between the former and the new, the material in hand is plastic and has not as yet had time to crystallise into its ultimate form. Now, the difficulty which the student experiences is to keep pace with his subjects. He does not doubt that lecturers are master hands, but he finds that the material dealt with covers so much ground, and is, as I have said, so novel and complex, that he is conscious that he is being left behind. It seems to him that his teachers are like the giants of old and in their attempts to scale the heavens are heaping Ossa on Pelion, and inadvertently crushing his prostrate form beneath the superincumbent weight. And may it not sometimes be that recent advances are so seductive to the teacher that they tempt him to introduce them to his class, with the result that he does not dwell with sufficient emphasis and repetition on the more prosaic principles of his subject, albeit they are all that the embryonic student can fully grasp or even partially understand. A class which has passed through one of these preliminary courses may be divided into the abler and the average man. The former in many instances has acquired an amount of knowledge which does him infinite credit. But it is knowledge of a particular kind. It is almost all on the surface. It has not had time to eat its way in and become deep-set. It is very largely a question of mere memory. Take such a man off the line along which he has been rapidly conducted, and turn the subject round, and present it in a fresh aspect, and he is soon beyond his depth. It becomes obvious that though he has remembered much the knowledge has not become his own; he has not, indeed, had leisure in which to read, mark, learn, and inwardly digest it. He has not, in the words of Richard Wiseman, "been able to set some time apart for reflection upon his labours."

With the average man the whole business has from the first been hopeless. His mind is not a sensitive photograph plate on which a short exposure, however good the lens, will secure a clear and abiding picture. He has been outpaced, and, with all sympathy be it said, he has been spending many an hour *strenue nihil agendo*—in strenuously doing nothing. All along he has been conscious of a mental surfeit, and as soon as he has happily got through his examination he turns from his depressing task with a feeling of profound relief, and discards his subject without even the forms of regret.

I am anxious to avoid anything like exaggeration, and particularly to keep, with a good margin, clear of even the appearance of criticising teachers whose only fault is that they cannot achieve the impossible. I desire only to raise the question, once again, whether some modification of the present system is not urgently required.

I know that a large number of the ablest teachers of the day are anxious that a satisfactory solution should be found. The problem is how to cut the garment according to the cloth—how to arrange the work so that the curriculum of the student of medicine shall lead to satisfactory results. We have to remember, *Ars longa, vita brevis*. Professor E. H. Starling (and where can we find a higher authority?) has put the matter in a nut-shell (let the medley of metaphors be forgiven) when he says you cannot put a quart of fluid into a pint pot.

The difficulty which we have to face is of no recent origin. On the contrary, it is one of the oldest in the whole field of education. Confessing that no one can learn everything, it becomes a question of *selection* and of determining in any given case what is really *ad hoc*, what is the particular knowledge which the student requires, and how much of this he can be taught in the circumstances in which he is placed.

But this is not the only matter before us. We have to consider the result of the present system, not merely in reference to what the student has learned, and will retain in a serviceable form for future use, but what kind of mental training he has been passing through, and what effect his work has had on his mental evolution. Is not this a matter of supreme importance? Is there any calling which demands a wider diversity of well-matured mental qualities,

a more many-sided education in the true sense of the word, than ours? How can a profession which has its foundations laid in the four sciences which I have mentioned, and which constantly avails itself of them and uses their methods, be adequately followed by anyone who has not had a scientific education, whose higher mental faculties have not been judiciously developed and cultivated? As practitioners of medicine we are frequently called upon to deal with problems which are in a high degree complex, in which the underlying facts are numerous, widely diverse, and often, as it seems, contradictory, while our knowledge is, as we are often painfully aware, rudimentary, so that we are working in dim twilight, or even wholly in the dark. Moreover, however unconscious or forgetful of it we may be, we are invariably face to face with facts which always claim to say the last word. In the practice of the law facts are as clay in the hands of the potter; in theology facts and dogmas are often convertible terms; but with the surgeon, as with the engineer, facts are stubborn things. Let the engineer build too flimsy a bridge, or the surgeon overlook a fracture or an appendicitis, and the fact will avenge itself. In both cases alike the penalty will have to be paid in coin of the surgeon's regret and of the patient's injury. If all this is true, does not the training of the student of medicine claim a foremost place? Mere information is, so to say, but raw material and of little value to the student unless he can manufacture it for his own use. But how can he do this when he is constantly in active pursuit, when, to put it in another way, he is being constantly overfed with material which he cannot assimilate? May not his condition be fitly compared to a round-celled sarcoma in which only disorderly growth, but no development is taking place? Instead of developing his powers of observation, which in most of us, when we compare them with those of a portrait painter, a naturalist, a Red Indian, or many of the birds and lower animals, are conspicuously rudimentary and defective; instead of forming the habit of thinking closely over what he has observed; instead of learning to collect, analyse, and arrange evidence, and acquire a judicial habit of mind, we see him leaving his higher faculties in abeyance and surcharging his memory with what are to him mere crude and amorphous details—*rudis indigestaque moles*—with the result that in hours of depression he emphatically endorses the statement of the Preacher that "much study is a weariness of the flesh."

### IMPORTANCE OF ESSENTIALS.

All this forces itself on my mind alike at examinations and in class-teaching in surgery. I find that men who are quite obviously intelligent and serious students show an altogether deficient acquaintance with, for instance, the essentials of surgical anatomy. They evince little sense of proportion and seem to have paid as much attention to the interlacement of small nerves in the side of the neck as to the landmarks in the middle line; to the details of the origin and insertion of the abdominal muscles as to the anatomy of inguinal hernia; to the anastomosis of arteries around the knee as to the relative position of the important structures in the popliteal space, or the mechanism of the knee-joint, with the result that, having tried to learn everything, they have mastered hardly anything—anise and cumin seem in their eyes to be of very much the same value as the weightier matters of the law. Was not Sir William Turner the foremost anatomical teacher of his day because he drove home the principles of his subject in carefully selected examples, and because he kept to essentials and largely eschewed detail? His idea seemed to be that, as it was impossible to teach the whole of his subject (and that if he could a great deal would be entirely useless to medical students), his proper course was to take what was essential and sternly leave the rest. Under this regimen his pupils had time to assimilate what he taught them, and the result has been that many men who passed through his hands have in their turn become distinguished teachers of the subject. I have heard that Lord Leighton, when a young man, on returning from Italy, brought ten copies of pictures which he had made in a fortnight. Asked how he could possibly have done so much in the time, he replied that he had thoroughly learned the first principles of painting.

In alluding to this question I cannot refrain from saying that the present rate of rejections, taking into account the, to my mind, unquestionable fact that the students of to-day stand at a high level of intelligence and industry, is very notable. The rejections in anatomy and physiology at the conjoint examinations of the two Royal Colleges in the last five years have been between 39 and 47 per cent.; last year they were 45 per cent.; while those in surgery were nearly 50 per cent. Ought we not to inquire how these figures can be explained? How is it that little more than half the number of students who present themselves have reached the standard of a pass examination? I was, myself, for some years an examiner in anatomy and in surgery for the Royal College of Surgeons of England, and I am convinced that the standard is not at all too high. I venture to say that the high rate of rejections is, at least in some degree, due to the circumstance that men have been from the first struggling under the incubus of an overloaded curriculum: and I know I am merely agreeing with many prominent leaders that if we could throw out some ballast the ship would make better ocean way. Could there be some adjustment, the teaching of the preliminary subjects would become in the highest degree valuable to the student of medicine; for he would not only have had the foundations of his work laid on a broad and lasting foundation, but he would have been made, in a real sense, a student of science. The difficulty has for some time attracted general and earnest attention, and the authorities concerned have taken the matter long in hand. It is with this movement that, in all humility, I desire to associate myself. The time seems to have come for taking the bull by the horns, and considering where the line should be drawn, by general consent—is this really beyond the wit of man to achieve?—between that which is of primary and that which is of secondary or even of third-rate importance, and then for concentrating the attention of the student on the former only. Does not every great pleader, in addressing a jury, dwell on chief considerations, and by frequent, or as it may seem tiresome, repetition drive home the main points of his case instead of watering them down, and washing out their colour by mixing them up with too many details? Does he not know that his success lies, not in an elaborate argument, in which, like Burke, he goes on refining, but in his being able to make the jury see clearly three or four points which, as he strives to convince them, entitle him to a verdict in his client's favour?

### PROPOSED CONFERENCE.

Might not a medical education conference be held at which all who are interested should be represented. No one can be more conscious of the difficulties of the situation than myself. Yet I believe there is good ground for hoping that great advantage might be secured if a conference could be held. The objects of the conference would be to consider the question of the education of the student of medicine as a whole; to recognise limitations necessarily imposed by the period beyond which the curriculum cannot be extended; to determine the part which each preliminary subject should take; and to agree as to what is essential and what can be dispensed with without real loss, or even with advantage.

There are some considerations which I think would have a weighty influence in promoting the success of such a conference:—

1. The mere meeting together of the representatives of the general body of teachers would in itself emphasise the fact that the object in which all alike are engaged is, not the training of specialists in the individual sciences concerned, but the education of students of medicine.

2. As medicine has now become a department of biology, and as the responsibility of its leaders to the community is yearly increasing, are they not justified in making, are they not indeed constrained to make, an earnest appeal to specialists in other subjects for their generous assistance, seeing that without their coöperation the adequate education of medical students is no longer possible?

3. Each teacher, subject only to the limitations imposed by the object in view—medical education—would be absolutely independent and in every sense unfettered.

4. Each would enjoy the satisfaction of knowing that he could make his teaching thorough, and turn out students who had acquired not merely an evanescent smattering but a sound and permanent grip of the principles of their subject. To take anatomy, the subject on which, as a former teacher, I may venture to speak, I cannot but believe that professors in the universities, and lecturers in the medical schools, would find this amended programme a

great relief. Not being medical men they would welcome some definite information as to the lines on which their teaching of the subject would be most valuable, and as to the areas which would furnish the best illustrations for medical purposes of the principles they desired to enforce.

5. Demonstrators of anatomy would have constant opportunities for going beyond mere tedious anatomical facts to their meaning as to function and their bearing on medicine and surgery. The value of such teaching would be at once apparent when the student began his clinical work, and when a sound knowledge of anatomy is essential. To speak plainly, is it not a farce to discuss femoral hernia, flat foot, or the deformity of the knee-joint in tuberculous disease with a student who has never thoroughly known or who has forgotten his anatomy?

### TEACHING OF SURGERY.

As to surgery—I will not venture a word as to medicine—is the teaching of this subject in all instances well organised and sufficiently methodical? My feeling is that this is not the case. Surgery, as I have already said, makes special demands on the powers of observation, a trained eye, a delicate touch of hand, skilful manipulation, a familiarity with the use of instruments and appliances, and the technicalities of aseptics, while some straight hints to the student as to his duties and responsibilities when he becomes a clinical clerk or dresser are urgently required. Moreover, is it not advisable that pains should be taken to fully instruct the beginner in the principles which underlie the collection and use of evidence, to emphasise the difference between the forms of evidence—between the direct and the circumstantial—and to show in what cases the one or the other, or a combination of the two, must be depended on, and what difficulties have to be met, and what pitfalls avoided? Most men are naturally very unobservant. It is startling to see what they can overlook. How true it is that the eye can see only what the eye brings the means of seeing; how real is the danger that he who is untrained to observe critically, and discriminate accurately, will see what he is looking for. Before he begins the study of medicine and surgery, should not the student pass through a preliminary course in which the matters I have briefly alluded to are thoroughly and systematically taught? Would he not keenly appreciate such instruction, and would he not find it of inestimable value in the out-patient rooms, the wards, and the operating theatre? As all these things are necessary ought the student to be left to pick them up haphazard? Would such a happy-go-lucky proceeding be allowed in the instance of a lieutenant on board a cruiser, or an apprentice at Elswick? Yet are not such cases to all practical purposes the same?

I pass over the out-patient room and the special departments, for I believe they are, in all important medical schools, admirably conducted, and that they contribute, in a degree that can hardly be exaggerated, to the education of the student.

In the wards, though there are many exceptions, teaching could with great advantage be somewhat remodelled. Every hospital ward teems with material for clinical teaching. Every case serves as a text. And it is in the wards that the student should gain a very large share of his professional education. The surgeon in charge—and the more eminent he is the more will it be the case—cannot possibly give much time to systematic teaching. Would not three hours a week be an outside figure? To provide him with thorough and ample clinical instruction should not the student, fresh from the preliminary class, pass into the hands of a ward tutor? This appointment has been made already in some hospitals. The ward tutor is a junior teacher. He has a class limited to ten. These he instructs in a suitable number of cases, in note taking, surgical anatomy, symptoms, methods of examination, special appliances, and so forth. His aim is to be thorough, and to work out the cases he selects with deliberation and completeness. Such work as this would not only interest but educate a man, while there can be no doubt that it would be highly valued by every intelligent student.

The work of the tutor when properly and loyally performed would not interfere with cases in which the visiting surgeon was interested, or with his authority, to the wards. Such cases as he desired would be left entirely alone. The tutor would take only cases in which the surgeon, for teaching purposes, did not concern himself; nor would this be any drawback, for the simplest cases, after all, are the most suitable for the instruction of beginners.

A special word to those who from to-day are to have the University of Leeds for their *Alma Mater*. To those who have won the prizes which it has been my pleasant office to present, let me say this. You must recollect that there has been a "proxime accessit" close on your heels. You have won your first obstacle race, but you will find many more in front of you as the years roll on, and if you are still to win you must keep in mind the fable about the hare and the tortoise. Those who have not won this time no doubt mean to do so on the next occasion. For them the fable must be Bruce and the Spider. But let both sides note that prizemen often fail, and that men who do not get prizes often succeed, later on. All must remember that duty is the stern daughter of the voice of God, and that the best asset for any man is a high and honourable character.

## INDUSTRIAL TUBERCULOSIS.[1]

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TUBERCULOSIS is a disease brought about by infection among those predisposed to it, whether such predisposition arises from inheritance, environment, or pre existing disease. It does not attack the robust unless the dose of infection or its virulence is excessive. Wealth protects against consumption by providing the food, clothing, and leisure, and especially the knowledge, housing, and environment which render the ubiquitous bacillus comparatively impotent. Poverty, overcrowding, fatigue, malnutrition of every kind, with ignorance, indifference, and other attendant evils, physical, social, and moral, are its universal allies.

The industrial classes suffer from consumption at least twice as heavily as the leisured classes, and in many occupations the penalty paid in phthisis mortality is from five to ten times that of the phthisis mortality falling upon those who do not toil. The conditions under which many industries are carried on, and in which a large proportion of workers live, are therefore powerful agents predisposing to tuberculosis.

The considerations which form the bulk of this paper are based upon a study of the mortality of phthisis in various groups of the population of England and Wales. In all studies of statistics which deal with the occupational mortality from phthisis, it must always be remembered that the naturally weak will tend to leave or to avoid those occupations which make demands upon great strength or activity. They tend also to drift into the ranks of those engaged in casual and light labour. Alcohol, no doubt, is also responsible for recruiting these ranks, as well as being a prevalent cause of death in many of the same groups, which, it will be found, show a high mortality from consumption.

Overcrowding and low wages go hand-in-hand with casual labour. Both these conditions have frequently been shown to have a close relation with high phthisis mortality. They have come to be accepted as inevitable and normal in many grades of workers in our civilised communities. The political economy of this part of the question is a matter for the statesman rather than the physician, and I do not intend to touch upon it further here, beyond saying that it is not for medical men to look upon it as a satisfactory state of things or one which should be regarded with complacency.

Phthisis as a disease of occupation can be considered firstly as to its comparative mortality in different occupations, and secondly as to the comparative percentage of deaths it causes in different occupations.

Firstly, and this is the only accurate way, we can compare the actual mortality from phthisis in different occupations by figures calculated for the purpose of comparison from the actual death-rates per 1000 living.

Secondly, we can take the point of view which compares the percentage of the total deaths which occurs from phthisis in one occupation with the percentage which occurs in others. This comparison, of which medical authors have always been particularly fond, must be used with discretion, and is liable

[1] This paper is based on part of a report on "Phthisis as a Disease of Occupation," presented to the Second International Congress on Industrial Diseases, Brussels, September, 1910.

to lead to wrong conclusions. For instance, if an occupation be healthy as regards phthisis, but unhealthy in regard to other respiratory diseases, and perhaps to many other causes of death, phthisis would form a small proportion of the total causes of death, and yet the number per 1000 living in that occupation who would be likely to die from phthisis might be greater than the average death-rate from phthisis of all classes per 1000 living. But it is an interesting figure when calculated as a percentage, in that it suggests for the particular occupation under consideration the proportion that will die of the disease, and in some groups affords a legitimate basis for comparison. On the other hand, if an occupation be particularly unhealthy as regards consumption and healthy as regards other causes of death, it is clear that phthisis will present a high proportion of the total causes of death, and yet the actual death-rates from phthisis in that occupation be no greater, or even less, than the average death-rate from phthisis per 1000 living, and the total death-rate of the occupation may be even less than the average total. In the following tables the occupations are classified in comparison with all males taken together. The figure used as a basis for comparison is, for all males from all causes taken together, 1000. This figure 1000, it must be clearly understood, is simply an expression as a basis of comparison; it can be divided into its component parts, the various causes of death, and in the statistics on which this paper is founded phthisis is represented for all males by the figure 186. In other words, of 1000 deaths of all males from all causes 186 are due to phthisis (18·6 per cent.).

Another useful comparative figure is that of the agriculturist, which is, for all causes, 602, and for phthisis 85 (14 per cent.). The agriculturist is, as a labourer, among the worst paid, worst fed, and worst housed of the working classes, yet his largely outdoor occupations and freedom from overcrowding, and hence lessened intensity of infection, render his figure of comparative mortality from consumption a standard for measurement of other occupations.

In the following tables each group of occupations is arranged in the order of the comparative mortality from phthisis. The percentage of deaths from phthisis have also been calculated and placed in a column by the side of the comparative mortality figures. The comparative mortality figures are those given in the official returns.[2]

GROUPS OF FIGURES SHOWING—

*For Ages 25–65.*

| Comparative mortality, all causes. | Comparative mortality from phthisis. | Percentage of phthisis. | Occupation. | |
|---|---|---|---|---|
| 1000 | 186 | 18·6 | All males. | Standards. |
| 925 | 175 | 18·6 | Occupied males. | Standards. |
| 602 | 85 | 14·0 | Agriculturists. | Standards. |
| | | | *Professional Classes.* | |
| 515 | 53 | 10·2 | Clergymen. | |
| 952 | 65 | 6·8 | Physicians and surgeons. | |
| 739 | 87 | 11·8 | Barristers. | |
| 599 | 99 | 14·9 | Schoolmasters and teachers. | |
| 760 | 138 | 18·0 | Artists, engravers, sculptors, architects. | |
| 907 | 161 | 17·7 | Commercial travellers. | |
| 1140 | 301 | 26·0 | Musicians and music teachers. | |

In the above group it is interesting to note that the last class has also double the average mortality from alcoholism.

*Clerks and Officials.*

| | | | |
|---|---|---|---|
| 586 | 73 | 13·0 | Gamekeepers. |
| 723 | 129 | 17·8 | Civil Service clerks and officials. |
| 707 | 153 | 22·0 | Railway officials, clerks. |
| 791 | 160 | 20·2 | Civil Service messengers. |
| 815 | 178 | 21·9 | Domestic indoor servants. |
| 837 | 181 | 22·0 | Commercial clerks, insurance clerks, &c. |
| 880 | 237 | 27·0 | Law clerks. |
| 1341 | 368 | 27·0 | Messengers, porters (not railway or Government). |

[2] Dr. Tatham's Supplement to the Sixty-fifth Annual Report of the Registrar-General.

In these classes the only out-door occupation, the gamekeeper, introduced for comparison, has a large pre-eminence in health. Of the rest, a post under Government carries great advantages, partly due to selection by medical examination. The last class (which has double the average alcoholism) includes many weaklings and failures in other callings, but the law clerk is nearly as bad and shows a high phthisis mortality with a low general mortality. His alcoholism is half the average.

*Agricultural Classes.*

| Comparative mortality, all causes. | Comparative mortality from phthisis. | Percentage of phthisis. | Occupation. |
|---|---|---|---|
| 562 | 71 | 12·6 | Farmers, graziers. |
| 572 | 82 | 14·3 | Farm labourer, farm servant. |
| 551 | 82 | 15·0 | Labourer (agricultural districts). |
| 527 | 83 | 15·7 | Gardener, nurserymen, seedsmen. |
| 602 | 85 | 14·0 | Agriculturists. |
| | | | *Transport Service.* |
| 582 | 63 | 10·8 | Railway engine-driver, stoker. |
| 892 | 96 | 10·7 | Fisherman. |
| 773 | 111 | 14·3 | Railway guard, porter, pointsman. |
| 1235 | 157 | 12·8 | Bargemen. |
| 1094 | 169 | 15·4 | Carmen, carriers. |
| 984 | 186 | 19·0 | Tramway service. |
| 1062 | 216 | 26·0 | Coach, cab, omnibus service. |
| 1547 | 249 | 16·0 | Seamen, &c. (Merchant Service). |

In the above two groups engaged in outdoor occupations (fishermen being introduced for comparison with the transport service), the two last also have excessive alcoholism. Both seamen and bargemen have 4–4½ times the average accident mortality. Nearly all classes in these two groups are below the average phthisis mortality, but the agricultural classes are pre-eminently healthy, only being equalled by the learned professions as regards phthisis, and having a lower general mortality than all except clergymen.

*Shopkeepers.*

*Class I.—Such as are largely engaged in open shops or out of doors.*

| | | | |
|---|---|---|---|
| 776 | 90 | 11·6 | Milkmen, cheesemongers. |
| 882 | 151 | 17·0 | Fruiterers and greengrocers. |
| 943 | 158 | 16·7 | Fishmongers, poulterers. |
| 1062 | 172 | 16·2 | Butchers. |
| 1778 | 516 | 29·0 | Costermongers, hawkers. |

The protective influence of fresh air is well shown here, all but the last class having phthisis mortality below the standard of all males. The percentage of phthisis deaths is also low in all but the last class. This class includes many of the very poor, and many weaklings and failures in other occupations. In this class alcoholism is also high, being twice the average. Fishmongers and fruiterers have one and a half and butchers twice the average amount of alcoholism mortality. Milkmen are below the average in alcoholism.

*Class II.—Such as are Largely Engaged in Closed Shops or Indoors.*

| | | | |
|---|---|---|---|
| 734 | 100 | 13·6 | Maltster. |
| 67 | 115 | 17·0 | Grocer. |
| 852 | 156 | 17·8 | *Baker and confectioner. |
| 817 | 183 | 22·0 | Watch, clock, scientific instrument maker, and jeweller. |
| 755 | 188 | 24·9 | *Draper, linen-draper, mercer. |
| 872 | 200 | 23·0 | Stationer, publisher, newsagent, stationery manufacturer. |
| 889 | 213 | 23·9 | *Saddler and harness-maker. |
| 953 | 236 | 24·7 | *Tailor. |
| 898 | 237 | 26·0 | *Tobacconist. |
| 1070 | 253 | 23·6 | *Hairdresser. |
| 901 | 256 | 26·0 | Shoemaker |
| 1046 | 272 | 26·0 | *Hatter. |
| 1274 | 314 | 23·7 | *Furrier and skinner. |

These indoor shopkeepers, some of whose trades may be called (*) "dusty occupations," show a general high phthisis mortality, both actual and expressed as percentages. All have a low alcohol mortality, except the hairdresser and furrier, where it is a little above the average. Confinement (and in some classes foul air and dust) and the physique of those engaged in these trades are the causes of the phthisis excess.

*The Liquor Trade.*

| Comparative mortality, all causes. | Comparative mortality from phthisis. | Percentage of phthisis. | Occupation. |
|---|---|---|---|
| 1324 | 246 | 19·0 | Brewers. |
| 1562 | 247 | 15·6 | Innkeepers, &c. (London). |
| 1945 | 249 | 12·8 | Innkeepers, &c. (industrial districts). |
| 1689 | 252 | 15·0 | Innkeepers, publicans, wine, spirit, and beer dealers (all districts). |
| 1901 | 275 | 14·4 | Innkeepers, servants, &c. (masters and servants together; industrial districts). |
| 1415 | 278 | 19·0 | Innkeepers (agricultural districts). |
| 1410 | 288 | 20·0 | Innkeepers, servants, &c. (masters and servants together; agricultural districts). |
| 1697 | 306 | 17·0 | Innkeepers, servants, &c. (masters and servants together; all districts). |
| 1083 | 410 | 38·0 | Inn and hotel servants only (agricultural districts). |
| 1691 | 426 | 25·0 | Inn and hotel servants only (industrial districts). |
| 1814 | 443 | 24·0 | Innkeepers, servants, &c. (masters and servants together; London district). |
| 1767 | 533 | 30·0 | Inn and hotel servants only (all districts). |
| 2121 | 680 | 32·0 | Inn and hotel servants only (London district). |

Those engaged in the selling of alcohol have an excessive general *and* phthisis mortality in every case. In all, alcoholism is greatly in excess, being seven times the average in the dealers (masters) and nine times the average in the servants (all districts). The latter have twice the phthisis mortality of the former, perhaps on account of worse food and housing. Confinement, foul air, and alcoholic excess are the causes of high phthisis mortality in the liquor trade. "La phthisie se prend sur le zinc."

*Textile Industries, &c.*

| | | | |
|---|---|---|---|
| 684 | 139 | 20·3 | Paper manufacture. |
| 927 | 157 | 16·0 | *Wool, worsted manufacture. |
| 942 | 167 | 17·0 | *Carpet, rug, felt manufacture. |
| 826 | 172 | 22·7 | *Rope, cord, twine manufacture. |
| 831 | 183 | 22·0 | Lace manufacture. |
| 1066 | 184 | 17·2 | *Dyer, printer, bleacher, and finisher. |
| 1037 | 192 | 17·2 | *Cotton manufacture. |
| 892 | 199 | 22·0 | Silk, satin, crape manufacture. |
| 853 | 211 | 24·7 | Hosiery manufacture. |
| 1216 | 325 | 26·7 | *Brush, broom makers, hair and bristle workers. |

Several of these occupations are carried on (*) in foul and dusty air. The phthisis mortality is not largely different from the standard of all males, but the last class shows a heavy figure. This class includes a number of poor workers who are not addicted to alcoholism in excess, and there is less than the average alcohol mortality in all the classes of this group, except the lace-workers, in whom, including liver affections, there is a slight excess. In papermakers the alcoholism is very low.

The tables which follow are arranged in nine classes: (I.) Wood-workers; (II.) printers and allied trades; (III.) steel- and iron-workers; (IV.) metal-workers; (V.) coal-workers; (VI.) building trades &c.; (VII.) miners and quarrymen; (VIII.) glass-, tile-, and earthenware-makers; and (IX.) other mechanics.

*Mechanics and Artisans.*

| Comparative mortality, all causes. | Comparative mortality from phthisis. | Percentage of phthisis. | Occupation. |
|---|---|---|---|
| *Class I.—Wood-workers* | | | |
| 717 | 114 | 15·8 | Sawyer. |
| 774 | 124 | 16·0 | Coach, carriage, railway-coach builder. |
| 757 | 138 | 18·0 | Wheelwright. |
| 769 | 144 | 18·0 | *Carpenter and joiner. |
| 888 | 217 | 24·0 | *Cabinet-maker. |
| 1104 | 263 | 22·9 | *Wood-turner, cooper. |

The last two classes only show an excess of phthisis mortality. Some of these occupations (*) are classed as "dusty." All are below the average in alcoholism.

| | | | |
|---|---|---|---|
| *Class II.—Printers and Allied Trades.* | | | |
| 910 | 240 | 26·0 | Lithographer, copper, and steel-plate printer. |
| 889 | 273 | 30·0 | Bookbinder. |
| 935 | 290 | 31·0 | Printer. |

All these industries involve foul air. They do not present excessive alcoholism. All have a low general mortality with a high phthisis mortality.

| | | | |
|---|---|---|---|
| *Class III.—Steel- and Iron-workers.* | | | |
| 723 | 85 | 11·7 | Engine-driver, stoker, fireman (not railway, marine, nor agriculture). |
| 765 | 121 | 15·8 | Shipbuilding. |
| 971 | 142 | 14·6 | Boiler-maker. |
| 884 | 152 | 16·8 | *Blacksmith, striker. |
| 866 | 157 | 18·1 | Engine, machine, boiler-maker, fitter, millwright. |
| 848 | 160 | 18·8 | Engine, machine-maker, fitter, millwright. |
| 1137 | 182 | 15·7 | *Nail, anchor, chain, and other iron and steel manufacture. |
| 762 | 206 | 27·0 | *Cycle and motor manufacture. |
| 890 | 214 | 24·0 | *Lock, key, gas-fitting maker, gas-fitter. |
| 1087 | 223 | 20·5 | *Gunsmith. |
| 1231 | 353 | 28·6 | *Tool-, scissors-, file-, saw-, needle-makers. |
| 1602 | 375 | 22·8 | *File-maker. |
| 1460 | 516 | 34·0 | *Cutler, scissors-maker. |

Some of the above occupations (*) are classed as "dusty." All except the gunsmith have less than the average alcoholism. On the whole the steel- and iron-workers show less than the average phthisis mortality.

| | | | |
|---|---|---|---|
| *Class IV.—Metal workers.* | | | |
| 1041 | 160 | 14·8 | Copper manufacture, worker, coppersmith. |
| 1385 | 166 | 11·7 | Lead manufacture, leaden goods worker. |
| 977 | 206 | 21·0 | Copper, tin, zinc, lead, brass manufacture and worker. |
| 974 | 209 | 21·0 | Tin-plate manufacture, tin-plate goods worker. |
| 889 | 230 | 23·0 | Zinc manufacture and worker. |
| 1074 | 262 | 23·4 | Brass, bronze manufacture, founder, finisher, worker. |

All of these occupations involve foul and dusty air. The lead industry has more than double the average alcoholism. All the other classes have less than the average alcoholism. The general excessive phthisis mortality is due to the foul and dusty air.

| | | | |
|---|---|---|---|
| *Class V.—Coal-workers.* | | | |
| 846 | 85 | 10·0 | Coal-miner. |
| 696 | 88 | 12·6 | Coal merchant, coal burner. |
| 838 | 135 | 16·0 | Gasworker service. |
| 1144 | 206 | 17·4 | Coalheaver. |
| 1240 | 263 | 21·0 | Chimney sweep. |

Of these, all are "dusty" occupations. The general and phthisis mortality are both low except in the last two cases. In both of these alcoholism is high, being twice and three times the average respectively. Coal dust seems to be less obnoxious to the lungs than metallic dust or stone dust.

| Comparative mortality, all causes. | Comparative mortality from phthisis. | Percentage of phthisis. | Occupation. |
|---|---|---|---|
| | | | *Class VI.—Building trades, &c. (other than Class I.).* |
| 1036 | 187 | 18·0 | Slater, tiler. |
| 862 | 188 | 21·4 | *Bricklayer, mason, builder. |
| 1041 | 203 | 19·0 | Plumber, painter, glazier. |
| 937 | 205 | 21·8 | Paperhanger, plasterer, whitewasher. |

Only one class is marked as "dusty."* The only class showing alcoholic excess is the last.

| | | | |
|---|---|---|---|
| | | | *Class VII.—Miners, quarrymen.* |
| 723 | 126 | 16·9 | Ironstone miner. |
| 905 | 186 | 20·2 | Stone, slate quarrier. |
| 1199 | 317 | 26·8 | Lead miner. |
| 1609 | 501 | 34·4 | Copper miner. |
| 2169 | 838 | 38·0 | Tin miner. |

All of these are dusty trades, involving sharp metallic particles. All have less than the average alcoholism, except the copper miner, whose alcohol mortality is three times the average.

| | | | |
|---|---|---|---|
| | | | *Class VIII.—Glass, tile, earthenware-makers.* |
| 622 | 72 | 11·5 | Brick, plain tile, terra-cotta worker. |
| 1202 | 269 | 22·6 | Glass manufacture. |
| 1420 | 277 | 19·0 | Potter, earthenware, &c., manufacture. |

All of these are more or less dusty trades. All have less than the average alcohol. The first is largely an outdoor occupation.

| | | | |
|---|---|---|---|
| | | | *Class IX.* |
| 1031 | 96 | 9·2 | Chemical manufacture. |
| 689 | 108 | 15·6 | Tallow, soap, glue, manure manufacture. |
| 737 | 132 | 17·9 | Tanner. |
| 944 | 199 | 21·0 | Currier. |

All of these have less than the average alcoholism and phthisis. Other respiratory diseases are very high in the case of the chemical manufacture.

| | | | |
|---|---|---|---|
| | | | *Labourers.* |
| 707 | 91 | 12·8 | Platelayer, railway labourer, navvy, &c., road labourer. |
| 1374 | 291 | 21·0 | Dock labourer, wharf labourer. |
| 1987 | 450 | 22·6 | General labourer. |
| 1808 | 531 | 29·0 | General labourer, London. |
| 2471 | 567 | 22·9 | General labourer (industrial districts). |

With the exception of the railway workers all these classes show a very great excess of phthisis. In the railway workers and road labourers alcoholism is less than half the average. In all the other groups it is about three times the average. All these groups include some of the poorest workers, badly housed and fed, and many who have been failures in other occupations, or who have drifted on account of alcoholism, or by reason of lack of qualities making for stability. The general labourer class forms about $\frac{1}{25}$th of the adult male population, and incurs about $\frac{1}{10}$th of the total phthisis mortality.

From the accompanying general review and re-arrangement of the Registrar-General's figures for male adults regarding the occupational mortality from phthisis (see Table), we can gather that there is a distinct relationship between certain kinds of employment and phthisis mortality. The one great preventive is fresh air. Apart from certain highly special conditions involving the respiration of sharp metallic particles (e.g., the tin-miners), the highest mortality from phthisis is associated either with the trade in alcohol, or with the occupations which are the refuge or the penalty in the struggle for existence of the least competent. The unskilled workers and labourers, the street sellers, and similar classes on the one hand, and systematic poisoning

SOME COMPARATIVE EXAMPLES OF LIFE WASTAGE BY PHTHISIS.

| Occupation. | Average age at death from all causes. | Average age at death from all causes (excluding phthisis). |
|---|---|---|
| Clergymen. | 63·0 | 64·0 |
| Musicians and music masters. | 48·0 | 50·0 |
| Schoolmaster and teacher. | 46·7 | 50·0 |
| Railway official, clerk. | 45·0 | 48·7 |
| Law clerk. | 44·4 | 48·3 |
| Commercial clerk. | 42·4 | 46·2 |
| Messenger and porter not railway or Government). | 47·0 | 50·0 |
| Innkeeper (London). | 45·0 | 49·0 |
| Inn, hotel, servants (London). | 39·0 | 42·0 |
| Costermongers, hawkers. | 50·0 | 52·3 |
| Printers. | 44·0 | 48·4 |
| Cycle and motor manufacture. | 35·0 | 38·0 |
| File maker. | 52·0 | 53·0 |
| Hatter. | 48·0 | 52·0 |
| Hairdresser. | 42·6 | 44·2 |
| Shoemaker. | 54·5 | 56·0 |
| Tin miners. | 51·0 | 54·0 |
| Engine-machine fitters. | 48·0 | 51·0 |

with alcohol on the other, cause a phthisis mortality of three to four times that of All Males, and six to eight times that of the agriculturist. In these classes phthisis is part of a high general mortality.

But we also find that there are many industries whose mortality as a whole is low and yet their phthisis mortality is about or above the average. Phthisis in these classes, therefore, forms a high percentage of total causes of death. Typical instances of these occupations are clerks, indoor shopkeepers, many of the textile industries, the printing trades, and those working in metals other than iron and steel. Confinement, foul air, metallic dust, bad housing, and other conditions inherent to the occupations are the causes of the phthisis excess.

In writing on the eventual conquest of consumption medical writers and laymen interested are prone to deal with it too exclusively from the point of view of infection. This involves the idea that by treating the early cases and segregating the advanced cases this great scourge of all civilised communities can be eradicated. To me, though I believe that much could be done along such lines, it seems that the greater part of the question would remain untouched. To secure a regular and systematic examination of every employee, as is now attempted in the case of school children, is at present a counsel of perfection, even if sufficient skilled observers were available to make the necessary early diagnosis. To attempt to segregate all the comparatively advanced cases would involve a great deal of concealment in the present state of popular ignorance. Compulsory notification is an essential first step in the discovery of the real number of the phthisical population.

The widest possible health teaching among the poorest and most ignorant classes of the people, and the most careful regulation of all the conditions under which the more or less skilled but yet unhealthy industries are carried on, are also essential preliminaries to the real stamping out of consumption. As the sanatorium is the basis of all successful curative treatment of tuberculosis, so a knowledge of sanatorium methods must be universally disseminated and acted upon as the basis of its prevention. The people must learn for themselves, and it is the duty of all interested in this subject to help them. Consumption is not to be regarded as on the same plane of infectivity as those diseases from which knowledge, good food, leisure, and healthy surroundings do not protect. Such diseases are much more easily controlled by segregation methods. The mass of conditions comprehended in the term "environment" is at least as important

as (and perhaps the figures I bring before you may suggest, even more important than) infection in the case of tuberculosis of the lungs. The revealed case of phthisis, if it be of the curable class, should be taken from the workshop and home to the sanatorium. But to prevent its occurrence much more is necessary; the lessons of the sanatorium must be enforced in the workshop and the home.

The sanatorium is an object-lesson for those who are not consumptive and a school of healthy living for those already affected; it cannot remedy the existing conditions of those most susceptible to the disease. It is these conditions which form the real problem for the statesmen whose care is that of the public health. Where the occupational surroundings are known to be conducive to the development of phthisis the workshop, office, and home must be regulated into at least as wholesome a condition as the coal mine or inspected factory. As a disease of society tuberculosis lies latent in the infected house and the insanitary workshop, ready to attack the weaklings, just as it lies latent in the human body seeking a favourable moment to invade the tissues. The citadels of this ubiquitous enemy must be defined and destroyed, and the humble privates in our ranks must not be exposed to its ravages undefended by the entrenchments of hygiene. One cannot win such a campaign by caring for the wounded only. We must not regard the casualties as inevitable. The disease is dying a natural death with improved conditions of the working classes, and it is by further development on such lines, and not otherwise, that its extermination will be attained.

Brook-street, W

# MINERAL WATERS AS ARTIFICIAL SERA:

## A SHORT ACCOUNT OF INVESTIGATIONS ON THE QUESTION OF MINERAL WATERS AS ARTIFICIAL SERA AND OF INJECTIONS OF MINERAL WATERS INTO THE TISSUES BOTH FROM A PHYSIOLOGICAL AND A THERAPEUTICAL POINT OF VIEW.

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I HAVE the honour of bringing forward a short account of the investigations, both experimental and clinical, that I have undertaken during several years on the question of utilising mineral waters as artificial sera, and I have grouped together in the present paper the various series of facts which have led me, as a practical conclusion, to extol the employment of mineral waters as injections into the tissues. This, I may add, is from a double point of view: (1) their application as artificial sera, and (2) as a new method of carrying out hydro-mineral treatment.

These investigations are of interest with regard not only to so-called hydrology but also to therapeutics and physiology. Space will not allow me at present to dwell on the question of the birth of the idea which led to the utilisation of mineral waters as injections into the tissues, or to enter into details concerning the researches of various authors who have taken up the question of mineral-water injections, such as Glénard, Billard and Ferrey-Rolles, R. Trémolières, and others. I must content myself therefore in the present paper with indicating the most important points of my experiments. I will only say that it was through my investigations on artificial sera with complicated mineralisation and the results in general obtained by injections of sea water that I was led to the idea of the mineral waters themselves being utilised as artificial sera.

### *Mineral Waters in Reference to their Employment as Artificial Sera or as Vital Plasma.*

The mineral waters which I have used up to the present for the study of this question are hypotonic, isotonic, and hypertonic, and correspond to many different chemical compositions, most of them, however, from a qualitative point of view approaching to a certain extent the composition of the blood plasma. As these waters, by reason of certain of their properties (electrical, colloidal, radio-active, or others little known or absolutely unknown), can be looked upon as "living" at their exit from the springs from which they rise, they can be used as injections at their issue in an aseptic condition without preliminary sterilisation, thus avoiding the slightest change in their natural condition and any possible modification of their "living state." In the event of sterilisation being necessary, it should be done at a low temperature by filtration through candles (filtration by compression by means of Chamberland's apparatus; filtration under pressure more or less strong of $CO_2$, of hydrogen, or of air with an intermediary isolating stratum of oil, this being excellent for bicarbonated, ferruginous, or sulphurous waters; filtration under pressure of oxygen or of other gases for special cases). Undoubtedly the best plan for keeping the water is in sealed flasks made of yellow or red glass.

The waters which hold insoluble mineral elements in suspension should be reserved for subcutaneous or intramuscular injections. In these different ways either hypotonic, isotonic, or hypertonic waters can be employed according to the effect to be brought about. In order to render hypotonic waters isotonic either chloride of sodium, sea water, very salt mineral water, or sugar can be employed. The waters to be injected can be utilised with their gases in solution; this has a certain amount of interest in the case of waters containing rare gases.

### *Theory and Experimental Demonstration of Mineral Waters as Vital Plasma or Artificial Sera.*

The conception of mineral waters as vital plasma and as artificial sera rests on a triple series of facts: (1) the facility of their injection in enormous quantities and by every possible channel, both in animals and in man; (2) the effects of their transfusion after copious blood-letting in animals and in man; and (3) the examples of the survival and reviving of organs or of cellular elements isolated from the body and placed in mineral waters.

1. Any mineral water can be injected, even in large quantities, into the tissues or into the blood. This conclusion is based on the results of copious and repeated intravenous injections given to animals, especially of prolonged and moderately rapid injections. The phenomena of diuresis, particularly observed under the influence of the latter, show that most mineral waters whose action has been studied are media even less toxic than ordinary normal salt solution, and that the changes they effect in the natural intracellular vital plasma are even less than those brought about by simple salt solution. Comparative experiments have shown that these diuretic phenomena are analogous to those which follow isotonic injections of sugar. On the other hand, mineral waters, the composition of which is to a certain extent different both quantitatively and qualitatively from the mineral composition of the blood plasma, can, notwithstanding, be injected in large quantities into the blood, and this allows of their employment as artificial sera which satisfy certain special indications. The fact of the feasibility of injecting mineral waters in large quantities without any toxic effect seems to be generally acknowledged, and this gives to the proceeding itself a value of great interest. It must be specified, however, that all these results are supported solely by experiments carried out with water sent some distance from its source and not with waters injected directly at the locality where they issue from the spring.

2. With human beings in those cases where after hæmorrhage injections of normal saline solution are indicated, injection into the veins of pretty large quantities of various suitable mineral waters is accompanied by no injurious action on the corpuscles, but, on the contrary, by very beneficial effects both on the blood and on the circulation.

3. Many mineral waters, at a suitable state of molecular concentration, are capable of preserving the excitability and of maintaining the spontaneous movements of organs having unstriped muscular fibres and furnished with glands (such as the intestines, the uterus, the bladder), when these parts are completely separated from the body and simply immersed in these waters. The intensity of the contractions is often stronger with mineral waters than with salt solution. These mineral waters play the part of specially exciting media, for, at the beginning of the immersion, the intestine contracts better in mineral water than in saline solution; and, still more, after it has remained for a long time in saline solution and so has become motionless, it will even then contract much more forcibly if plunged into mineral water.

Some waters, however, can exercise an inhibitory action owing to the preponderance of some of their elements (Mg), but even in such cases there is no question of any toxic action; intestine contracts again excellently when moved into suitable media.

The action of temperature on the contractions, in mineral waters, of organs having unstriped muscular tissue is the same as that noticed under identical conditions on the contractions of these organs in various artificial sera of complex mineralisation (highest temperature 38° to 39° C., the contractions begin at 25° to 26° C., and continue even down to 15° C., if after the organ has begun to contract it is slowly cooled). If the organs are kept at a low temperature in an ice-house, contractions by immersion in mineral waters can still be obtained by progressive heating, even after eight or nine days. The same phenomena as those manifested in the revival of contractions in the intestine when placed in complex artificial sera are also observed in the revival of contractions in mineral waters (a sudden revival at about 20° to 23° C., the second maximum temperature being about 35° C.). The same waters show a great superiority to salt solution with regard to spontaneous contractions of the ureter in guinea-pigs.

Organs with striated muscular fibres also retain their excitability for a longer period in mineral waters than in ordinary salt solution, and exhibit under the influence of the former stimulus much stronger contractions than when submitted to the action of the latter; this is the case, for example, in muscles of the bony skeleton when stimulated by artificial circulation, and also in a rabbit's œsophagus when simply immersed in these media. After being treated with mineral waters and kept in an ice-house the œsophagus can still be made to contract by electrical stimulus, even after it has been detached from the body of the animal for eight days. Finally, the contractions of the excised heart of a frog are much stronger under the influence of various mineral waters than under that of simple saline solution.

Investigations into the action of isotonic mineral waters, deprived of any possible excess of $CO_2$, on isolated cellular elements, such as red blood corpuscles or spermatozoa, prove that these waters do not exercise a toxic action on the living cell. Red blood corpuscles submitted to centrifugal action and to successive decantation, in which various mineral waters are the liquids employed, remain in a vital condition in these media. When reinjected, whilst in suspension in these same waters, into the animal from which they have been taken ("auto-transfusion") or into another animal of the same species ("iso-transfusion"), they revive it admirably, even after a blood-letting, which, if treated simply with transfusion of normal saline solution, would inevitably have proved fatal. Similar transfusions can be repeated several times on the same animal without the slightest manifestation of any bad effect or of any deleterious action of the mineral water on the red corpuscles. (Corpuscles, bathed in this way by mineral water and then transfused, are undoubtedly in a vital condition, preliminary investigation having proved to me that transfusion of corpuscles which preserve their physical characteristics but which have previously been submitted to some deleterious action does not bring about the survival of the animal.) Corpuscles that have remained in contact in a refrigerator for several weeks, but which all the time have been immersed in mineral waters, are still capable of producing the same reviving effects as fresh corpuscles.

In man auto-transfusion of corpuscles that have been immersed in mineral waters, practised after abundant and repeated blood-lettings, permits the withdrawal from the diseased organism of large quantities of serum (the toxic part of the blood), and thus the carrying out of a true lavage of the blood by means of merely a loss of serum, this, too, without bringing about the slightest anæmic condition of the individual; this happened in a case of grave uræmia. These repeated auto-transfusions are not accompanied by any deleterious action on the corpuscles. (Results of a similar nature are obtained with auto-transfusion of corpuscles kept in suspension in various complex artificial sera or in normal salt solution.) We have here to deal with a general method which, to my mind, can be of great service in all cases of disease where the serum has a high toxic power (endo- or exo-genetic intoxications, infections, &c.).

Human spermatozoa that already show at an ordinary temperature very intense movements retain their vitality much better in mineral waters than in pure salt solution. This conclusion is based: (1) on a study of the movements of spermatozoa immersed (like red corpuscles) in mineral water and in pure salt solution; (2) on the study of their movements in a mixture of spermatic fluid and of more or less large quantities of mineral water; and (3) on the study of their revival in these last media after having been kept several days at a low temperature (movements still seen eight days after emission of the spermatic fluid). The superiority of mineral waters over simple normal salt solution is due to their complex mineralisation and to the specially important action of some of their elements, such as calcium; this last is necessary not only for the production of contractions in organs having unstriped muscular fibres (to a less degree in those having striped muscular fibres), but also for the movements of the spermatozoa, as I have demonstrated in several experiments.

These successive series of investigations appear to me to establish on a sufficiently solid basis the conception of mineral waters as artificial sera and vital media. Moreover, this conception coincides very well with the theory of sea-water acting as a vital medium, for many mineral waters clearly have a pelagic origin.

### *Some Physiological Effects of Mineral Waters as Artificial Sera.*

Other physiological effects, differing from those just referred to with reference to the utility of mineral waters as artificial sera, allow us to show that the action of mineral waters from this point of view is often more powerful than that of normal salt solution. The phenomena of reaction produced in man after injections of considerable quantities of mineral waters are undoubtedly more marked than those following injections of the same quantities of simple saline solution. Their intensity, too, is greater in proportion to the greater hypertonicity of the waters injected.

On the blood and on the circulation injections of mineral waters exercise an action recalling mostly that of those artificial sera which have a complex mineralisation, notably with regard to coagulation and to the renovation of the blood corpuscles, also with regard to blood pressure and to cardiac contraction.

The increase in the coagulability of the blood both *in vivo* and *in vitro* under the influence of various mineral waters is much more evident than that produced by simple salt solution. A difference of the same kind shows itself in the hæmostatic action brought about by these same waters and that by salt solution when either is injected in cases of profuse hæmorrhage produced, for example, by transverse sections of muscles. These facts are in a great measure explained by the richness of these waters in lime salts. The mechanism of the hæmostatic action set up *in vivo* is double, being due, on the one hand, to the increase in the coagulability of the blood, and, on the other, to the agency of a vaso-constrictor mechanism.

The comparative effects of injections of ordinary saline solution and of injections of mineral waters on the renovation of the corpuscles, studied by means of two series of experiments, tend to the conclusion that the renovation of the corpuscles is more rapid under the influence of injections of mineral waters, and that the renovating effects are also in the latter case superior to those of salt solution, producing a lasting revival of animals which, had only transfusion of ordinary salt solution been practised, would inevitably have succumbed.

On the blood pressure there is also a difference of action. Certain mineral waters when injected produce a persistent rise of pressure at doses which with salt solution have far from the same effect. This action must again be attributed partly to the calcium; the same may be said of their action on cardiac contraction, which is much more marked with intravenous injections of mineral waters than with similar injections of normal salt solution.

With reference to the modifications produced on the phenomena of excretion and of nutrition under the influence of mineral water injections, the general differences between them and the ones brought about by salt solution can be compared to those produced by those artificial sera which have a complete mineralisation and those brought about by simple salt solution. That is to say, as a general conclusion, many mineral waters show organic media which are preferable in all points to those of normal saline solution.

Radio-activity of certain waters, or their artificial radio-activation brought about by the addition of bromide of radium or by induction, does not modify this conclusion and does not represent in any way a factor of toxic or hurtful qualities, this being proved by the action of these waters on isolated contractile organs of the body, on the red corpuscles, or on the spermatozoa.

*Deductions. Clinical Application of Mineral Water Injections into the Tissues.*

The therapeutical employment of mineral water injections becomes then perfectly logical. In a general way they can be used both in cases where injections of normal saline solution or of isotonic sea-water are indicated, as well as in those in which we consider it of importance to apply a hydro-mineral cure, the maximum conditions of activity of which we wish to realise. Here I may recall the net results obtained in cases that I have already published of adenitis, tuberculosis, osteitis, pulmonary tuberculosis (certain forms), lymphatism, asthenia and anæmia, malaria, diabetes, chronic rheumatism, ulceration, eczema, psoriasis, severe syphilis with intolerance for mercury, glycosuria, and experimental tuberculosis.

In order to render a precise statement of the indications necessary for injections of mineral waters of different groups many clinical observations are requisite, but from the present time, by taking as a basis for our researches the investigations already carried out on injections of normal saline solution and on hydromineral treatment administered by the classical methods, we can foresee the series of cases in which the mineral waters would be indicated. Naturally it would be most interesting if we could choose the water which, from its chemical composition and from its various known properties, would seem best suited to the case under treatment; thus a kind of differentiation, becoming more and more distinct, would take place between the different groups of mineral waters (bicarbonated, sulphurous, &c.) to be employed as injections.

A most important study is grafted on to the last dicta: it is the comparison on the one hand between the effects produced by injections of mineral waters taken on the spot from the spring itself (in most cases without any modification), and on the other hand, the effects produced by injection of the same waters after a more or less prolonged interval since their exit from the spring. It would be of very great interest to be able to give precise data concerning in what proportion the results obtained with the "living" waters can be assimilated with those of the "old" or "dead" waters. In any case injection of mineral water into the tissues at the spring itself should be investigated on analogous lines to those employed in the experimental researches mentioned in this paper.

These advantages of injections of mineral waters into the tissues as a method of so-called cellular balneotherapy and of the application of the hydromineral cure in general are very numerous, as I have shown in detail, but the greatest discrimination is imperative in utilising these injections in certain cases, *as they cannot in any way be looked upon as substitutes for the methods of administration habitually employed*, although they are calculated to augment the activity of these last and to notably enlarge the field of application, already so extended, of hydromineral medication.

Finally, we must realise the first-rate benefits that hydrologic therapy will receive from physiological data, these last pointing to a line of investigations which at the present time are only at their dawn, the grand total of which, however, will probably form the basis of experimental hydrology.

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LEWES VICTORIA HOSPITAL.—By the generosity of Mr. Augustus L. Christie a complete plant of the Roentgen rays has been installed at the Victoria Hospital on the Downs at Lewes. The new institution was opened on Feb. 2nd last by Princess Henry of Battenberg, and since that time the demands upon it have been exceedingly heavy, a fact accounted for by the up-to-date appliances. There has not, however, been a corresponding increase in the subscriptions, and at the annual meeting on Oct. 4th a strong appeal was made on behalf of the institution. It is to be hoped, too, that a little plain speaking by the mayor of the county town, in calling attention to a number of people who take no interest whatever in the hospital but are the first to appeal for letters for their domestics in times of need, will have the desired effect.

# ULCERATING GRANULOMA OF THE PUDENDA A PROTOZOAL DISEASE.

BY R. MARKHAM CARTER, M.B., M.R.C.S. ENG., L.R.C.P. LOND., D.T.M. LIVERP.,
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*Preliminary Communication.*

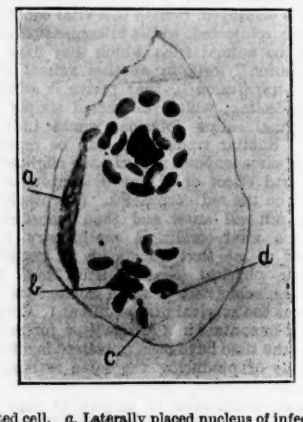
THIS interesting disease is one that is but rarely met with. It has taken some years to collect the material upon which the following observations have been made. Though the series of six cases is but a small one, it would seem sufficient to show that many of the views held by most observers regarding the etiology of the disease are entirely wrong.

Ulcerating granuloma of the pudenda is not a venereal disease, though, as a rule, the genitals and contiguous parts are the seat of infection. It is contagious and is auto-inoculated by the host on other parts of the body. The disease has been seen on the surface of the cheek, the buttock, &c. Maitland has described the disease as occurring within the buccal cavity, on the inner surface of the lips, gums, and inside of the cheek, but further confirmation of this distribution is necessary. The disease is usually seen in adults, and race plays no essential part in its etiology.

The distribution of the disease is extensive. It was first described by Conyers in 1896 in British Guiana, and later by Daniels in the South Pacific Islands. Northern Australia and New Guinea have given typical examples of the disease. It occurs in India perhaps more frequently than in other countries, and Maitland, Macleod, Powell Williams, and others have given us much literature on the subject.

According to former histological researches this disease has up to date always been classified amongst the infectious granulomatous tumours. However, if sections are stained as described below it will be found that the disease is due

FIG. 1.




An infected cell. *a*, Laterally placed nucleus of infected cell *b*, Deep-staining irregular central mass. *c*, Limit of clear area. *d*, Deep-staining dot. Drawn with 1/12 apochromatic and 8 compensating ocular Zeiss.

to a protozoal infection. Thin sections fixed to a slide are stained in a solution of Giemsa diluted 12 drops to 10 c.c. of distilled water. After this stain has acted for 20 minutes each section is washed in tap water for about 30 seconds, then dipped in eosin solution, 1 in 50,000, for 45 seconds, dehydrated, and brought up through xylol into Canada balsam. The second method is to stain a fixed section with a saturated solution of eosin in alcohol (95 per cent.) for five minutes; the solution must be three months old. The stained section is then washed in distilled water, and counter-stained with watery methylene blue, 1 in 1000, until the nuclei are stained deep blue. The slide is then washed in absolute alcohol for a few seconds and taken up through xylol into Canada balsam.

The first thing that strikes the eye will be that in certain areas lie masses of very large mononuclear cells, their cytoplasm distended with from 15 to 50 bean-shaped bodies resembling the gregariniform stage of a herpetomonas or crithidium. On using the higher powers of the microscope these bean-shaped parasites are seen to contain the usual cytological elements. The parasite, though slightly smaller than that seen in sections of Oriental sore, is very similar; and in the light of the recent work on Oriental sore, showing

FIG. 2.

Bean-shaped parasites on large scale. Drawn with 1/12 apochromatic and 12 compensating ocular Zeiss.

the crithidial monadine forms, &c., assumed by this protozoon, I consider that the parasite of ulcerating granuloma is of the same class, and will be found similarly to develop monadine and gregariniform phases in suitable culture media. For the present I propose, therefore, to consider ulcerating granuloma of the pudenda as due to a localised protozoal infection of man with either a herpetomonas or crithidium.

The parasites are found in large swollen cells, in which the nucleus is pushed to one side of the cell. The cytoplasm of the infected cells contains from 15 to 50 protozoal parasites arranged roughly in groups of 15 to 20, round a central homogeneous mass simulating the zooglia mass of Leishmania in cultivation. No flagella have been noted, but the fact that a deep staining dot lies external to and in close relationship with what seems to be the more mature form of the parasite is highly suggestive. The nuclei of the parasites stain a deep reddish violet, the dot almost black violet, and the cytoplasm of the parasite pale blue. The rest of the tissues in the neighbourhood of the infected area stain light blue. Lastly, it is interesting to note that each parasite seems surrounded by a faint unstained area suggestive of the similar appearance seen in staining for Negri bodies.

# A CASE OF TUMOUR OF THE PITUITARY BODY.

BY WILLIAM BOYD, M.B., CH.B. EDIN.,
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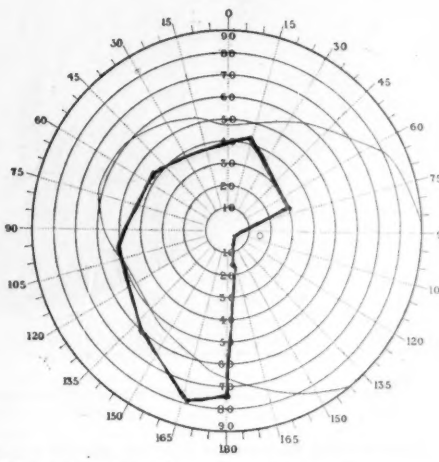
THE subject of tumours of the pituitary body has attracted a good deal of attention of late, and as the etiology and morbid anatomy of such tumours are still a matter of some obscurity, any case which serves to throw further light on the subject is deserving of attention. The condition of the cerebro-spinal fluid in such cases does not so far appear to have been noted, and this is one of several points of interest in the following case, for permission to publish the notes of which I am indebted to Dr. S. R. Macphail.

The patient, a man aged 36 years, married, was admitted to the Derby Borough Asylum on Dec. 22nd, 1909.

*History.*—Eight years ago the patient began to suffer from severe neuralgic pains, first in the left temple, and later in the right. Eighteen months later the sight in the left eye began to fail, and six months afterwards the right eye followed suit. The eye condition was treated in several hospitals, including St. Bartholomew's, at each of which large doses of iodide of potash were given, but both the sight and the headaches steadily became worse. In June, 1905, he began to have epileptic fits. There was no aura or local commencement; during the fit he bit his tongue and passed urine, and after the fit he fell into a deep sleep. Sometimes a succession of fits would occur, and he would pass into a condition of status epilepticus. In the course of the same year he had several mucous polypi removed from both nostrils. In 1906 he lost all sight in the left eye. In 1907 he became somewhat ataxic, and in the same year had an attack of acute mania, which has been followed by several attacks of excitement. During the last two years he has been gradually becoming more dull, stupid, and lethargic. In January, 1909, he lost all sight in the right eye. He has been getting very deaf, but for years has had a discharge from the right ear. In July, 1908, the middle ear was cleared out, but without benefit. He has always been a stout man, and has gained rather than lost weight during the present illness. His eyes are a good deal more prominent than they were a few years ago.

*Condition on admission.*—The patient was a strong, well-made man, with abundance of adipose tissue. The eyes were very prominent and staring. He was in a dazed and confused condition, unable to answer questions put to him, and requiring artificial feeding. He had no control of his vesical and rectal sphincters. Nothing abnormal was found in his circulatory, respiratory, and digestive systems. There was no polyuria, and his urine contained neither albumin nor sugar. From his left nostril there was a discharge of clear serous fluid, which appeared when he sat up in bed, and which fell drop by drop. It was highly albuminous, and on centrifuging was found to contain numerous leucocytes. As regards his nervous system, no paralysis of the arms or legs could be detected, nor any definite disturbance of sensation. He was very ataxic, even when sitting up in bed, but did not sway more to one side than to the other. The superficial reflexes were normal, but the deep reflexes were considerably exaggerated, those in the left leg being the most active. There was slight ankle clonus on the left side. The plantar reflex was flexion. Owing to his mental dulness it was not possible to test his cranial nerves with accuracy. There was weakness of all the extrinsic muscles of the left eye, the weakness being most marked in the superior rectus, internal rectus, and inferior oblique. The pupils were medium in size, equal, regular, and reacted well to accommodation; the reaction to light was very sluggish in the right eye and completely lost in the left. There was complete amblyopia, and double primary optic atrophy, this primary atrophy having been also observed in 1905 by Mr. Holmes Spicer at St. Bartholomew's Hospital. The blindness being complete, no observations could be made on his fields of vision, but fortunately some observations made in 1903 were available. These show that at that time the left eye was only capable of perceiving hand movements, while the right field of vision presented a beautiful example of hemianopia, the temporal half of the field being quite blind. (Fig. 1.) At that time he

FIG. 1.




Field of vision of the right eye, showing the temporal hemianopia.

is reported to have had choroiditis in both eyes. The earliest note of his ocular condition was in May, 1902, when his vision was normal and his fundi presented no unusual appearances. There was very marked deafness on both sides, but

whether of middle-ear or nervous origin could not be determined.

The condition of the cerebro-spinal fluid was extremely interesting. It came out under markedly increased pressure, was quite clear, and contained an enormous quantity of albumin. The Noguchi test was positive, and with Jones's ammonium sulphate ring test a positive reaction was obtained with a dilution of 1 in 15, the amount of albumin thus

his bladder and rectum, but he was dull, stupid, and confused until his death. He continued to have typical epileptic fits at intervals of a week or so; no sign of localising value was observed in any of the fits. The pupils varied considerably in size from day to day, and at times were unequal and irregular. After remaining in very much the same condition for four months he died with startling suddenness, simply turning over on his side in bed and expiring without a struggle or groan, and with nothing to show that he was in other than his usual condition.

FIG. 2.

Floor of skull, showing enlargement of pituitary fossa caused by erosion of the tumour. A, Communication with the antrum of Highmore. B, Body of sphenoid. C, Cavity.

greatly exceeding that usually found in general paralysis and tabes. Even more startling was the leucocyte count, which gave an average of 1630 per field under a magnification of 450 diameters, practically all the cells being lymphocytes.

*Subsequent course.*—After a few days the patient emerged somewhat from his condition of stupor and regained control of

*Post-mortem examination.*—The body was well-nourished and covered with a liberal supply of fat. There were no signs of disease in the thoracic and abdominal organs. The skull-cap was uniformly thickened, and the dura mater was adherent to it in places. The pia-arachnoid stripped easily.

At the base of the brain there was a large, soft, friable vascular tumour of a fleshy colour, which was growing downwards into the sella turcica, from which cavity it had to be torn before the brain could be removed. A mass of pulpy vascular material, not unlike red currant jelly, was left in the pituitary fossa. The tumour was then seen to be growing from the infundibulum, this being the only point at which it could not be separated from the brain. It was invested by a thin delicate membrane, which, however, had been torn away in places, leaving a granular surface exposed. In consistency it was gelatinous, and was in places almost cystic. Its length was 7·2 cm., its width 3·3 cm., and it extended from the optic chiasma to the middle of the pons, occupying rather more of the left than of the right side. The optic chiasma had been crushed out of recognition, the crura widely separated, and the pons greatly distorted. The most striking changes, however, were those in the floor of the skull. (Fig. 2.) The sella turcica had developed into a huge cavern 6·5 cm. long and 4 cm. wide. Opening out of it on either side was an oval aperture, that on the left side proving on investigation to communicate with the antrum of Highmore of that side. Thus the discharge from the left nostril, observed during life, was in reality an escape of cerebro-spinal fluid from the cranial cavity. The fossa had no bony floor, but merely a membranous partition separating it from the cavity of the pharynx. Microscopic examination of the tumour showed it to consist chiefly of large round and oval cells containing a large and distinct nucleus; there were numerous large thin-walled blood spaces, and here and there fibrous trabeculæ running through the tissue; the whole bore a close resemblance to a mixed-celled sarcoma.

The chief points of interest in the case were: (1) the long duration; (2) the absence of wasting and of any symptoms of acromegaly; (3) the sudden termination; (4) the nasal discharge of cerebro-spinal fluid; (5) the enormous amount of albumin and extraordinary lymphocytosis in the fluid from a case of nonsyphilitic tumour (for the naked-eye and microscopic characters, together with the resistance to large doses of potassium iodide, clearly point to the non-specific nature of the growth); and (6) the remarkable destruction to the floor of the skull.

Rowditch, Derby.

## A CASE OF
# CARCINOMA OF THE CÆCUM REMOVED AFTER A PRELIMINARY EVACUATION OF A FÆCAL ABSCESS AND AN ILEO-SIGMOIDOSTOMY; PATIENT WELL A YEAR LATER.

BY JOHN D. MALCOLM, M.B., C.M. EDIN., F.R.C.S. EDIN.,
SENIOR SURGEON TO THE SAMARITAN FREE HOSPITAL.

THE patient, a short stout man, 64 years of age, was sent to me on March 24th, 1909, by Dr. R. D. Mackintosh of Mortlake. He had for eight years been subject to attacks of pain in the right side of the abdomen which began suddenly and were accompanied by vomiting, retching, and constipation. The abdomen distended and weight was lost rapidly, but the temperature was never detected above the normal. A purge was taken and all the symptoms subsided when the bowels acted freely. The patient then felt quite well, put on flesh, and had no trouble for a time. The attacks had become more frequent and more prolonged, but the intervals were still considerable. For example, the health was quite good from November, 1908, to March 10th, 1909, and the weight increased by six pounds. Then the last attack began, accompanied by diarrhœa, which was a new symptom. The patient had occasionally felt a lump in his side, but it could not be found by Dr. Mackintosh until March, 1909, when it was easily discovered in the region of the gall-bladder. It was then quite mobile, but when I saw the patient ten days later there was a swelling fixed in the cæcal region, apparently about 3½ inches in diameter and making the skin stand out quite an inch from the general surface of the abdomen. The mass was resonant on percussion, tense and elastic to touch, and hardly at all tender. The rest of the abdomen was soft and flat. The patient was pale, but his temperature was not raised; he was again gaining weight, and his bowels and digestion were acting normally.

The physical conditions seemed to indicate malignant disease. The history suggested that a more favourable cause of the mischief, such as a chronic appendicitis, might exist, and it was decided to explore the abdomen.

*First operation.*—The first operation was performed on April 3rd, 1909, when the swelling had considerably increased in size. An incision made over its most prominent part opened the peritoneal cavity and revealed omentum adherent to the abdominal wall and to the swelling. On separating this, 7 or 8 ounces of fœtid pus were released, but the peritoneal sac was not fouled by this fluid. To the outer side of the pus cavity there was a hard mass about 2 inches in diameter. The upper part of the incision was closed and the abscess was drained. The wound healed well except where the tubes were, and after two days the whole of the intestinal contents escaped through the drainage opening. The swelling gradually became smaller and its outer part was then more prominent.

It was obvious that there was an obstruction of the intestine between the fistula and the anus, and it was equally certain that this was caused by a new growth. The temperature fluctuated a good deal, rising at times to 102° F., and it was decided to short circuit the intestine before undertaking radical treatment.

*Second operation.*—On June 3rd, 1909, the abdomen was opened in the middle line, the small intestine was divided conveniently near to the cæcum, its upper end was inserted into the side of the sigmoid flexure, and its lower end was closed and fixed to the back of the median incision. The patient was very feeble at the end of this operation but gradually rallied. The new incision did not heal by first intention, but its union was not greatly delayed, and progress was otherwise satisfactory. Fairly regular evacuations of the bowels through the anastomosis and anus were soon established, fæcal discharge ceased, the skin around the fistula, which had been inflamed, became soft and fairly healthy, and the abscess contracted until it was a short sinus. The temperature fell to normal, but it always rose if the drainage-tube was displaced, and this frequently occurred, especially when the patient tried to move about more freely.

At the end of July it was decided that an attempt should be made to remove the new growth, and from a pathological point of view there should have been no delay, but it was thought wise to allow time for the inflammatory mischief to subside, as the mass seemed to become less fixed and it was anticipated that the operation would in any case be a difficult and severe one. The date first arranged was postponed because the patient developed an acute laryngitis, with a sharp rise of temperature.

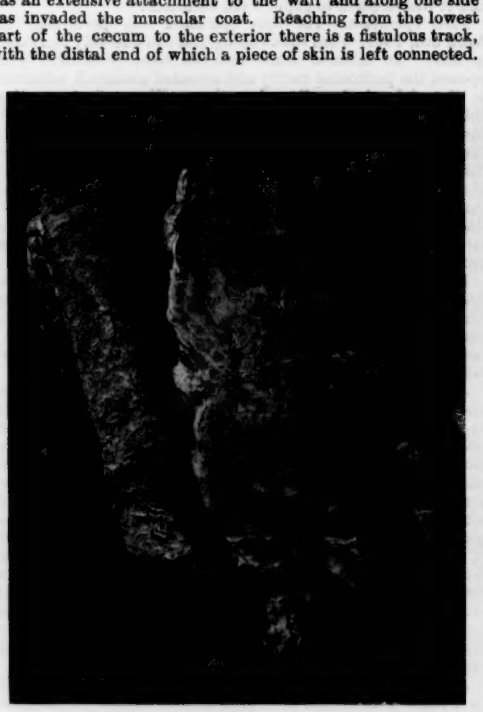
*Third operation.*—On Oct. 19th, 1909, I excised the scar of the first incision and isolated the sinus, the cæcum was exposed, the omentum was detached from it, and the peritoneal cavity was freely opened. The piece of gut between the cæcum and the median incision was separated, and the cæcum, which was almost universally adherent, was enucleated from its adventitious and natural connexions and was brought outside the abdominal cavity. The ascending colon was divided well above the diseased parts and its end was inverted. One gland in the meso-cæcum was about three-quarters of an inch long but not hard. It was removed, but unfortunately was lost. No others were seen or felt. Many ligatures were applied to bleeding points and the incision was closed except where it was drained. At the end of the operation the patient was in a state of extreme feebleness, the pulse being hardly perceptible, and therefore no attempt was made to examine the anastomosis.

Recovery from the immediate effects of the operation was rapid under treatment by saline injections into the rectum, by warmth, and by strychnia. The pulse was beating 90 times to the minute within an hour. Some trouble from vomiting and intestinal distension gave rise to anxiety which ceased after the fourth day. Again the wound did not heal by first intention, but by the middle of December there was complete union except for a healthy sinus from which some ligatures subsequently escaped. Dr. Mackintosh extracted the last of these in February and then the wound finally healed.

At this time the patient could walk seven miles without

undue fatigue. There was some swelling of the right leg when it was first used, but this soon passed off. The patient's weight steadily increased, he felt better each day, and he required no medicine to aid the intestine.

*Description of tumour.*—Mr. S. G. Shattock has kindly described the specimen shown in the picture as follows: The cæcum is distended with a finely papillary tumour which has an extensive attachment to the wall and along one side has invaded the muscular coat. Reaching from the lowest part of the cæcum to the exterior there is a fistulous track, with the distal end of which a piece of skin is left connected.



Section through cæcum showing fistula at lower end, viewed from behind. The appendix and the distended portion of small intestine are not seen.

The small intestine is considerably enlarged near its termination by an extension of the tumour into it. The juncture of the ileum with the cæcum is recognisable externally by a deep constriction. The vermiform appendix is free from disease. A tube can be readily passed from it into the cæcum, but it has no direct connexion with the fistula before referred to.

*Remarks.*—Mr. Shattock suggested that the growth began as a non-malignant slowly-growing papilloma and afterwards became carcinomatous and grew rapidly. This offers an easy interpretation of the phenomena of the case with perhaps the exception of the cause of the abscess. It is probable that during six or seven years the symptoms were due to a simple intestinal obstruction, relieved by clearing the bowel, and it is not unlikely that the growth developed much earlier and caused no symptoms. This explanation may apply to other cases in which malignant disease of the intestine has been discovered after a prolonged history of illness. Recorded cases[1] also show that the swelling is sometimes so elusive that its existence might be doubted by the surgeon even after he had felt it. The parts may be so mobile that the tumour gets displaced under the ribs, into the pelvis, or behind coils of gut, and it may be thought that a mass of hard fæces had been felt.

That the abscess in the case now related formed rapidly just before I saw the patient is certain, because ten days earlier the tumour was moveable and in quite a different position. The absence of fever and of other evidences of inflammation was remarkable, but the possibility of this in connexion with peritoneal suppuration is too well recognised to create surprise. It is certain that in circumstances which are not well defined micro-organisms, which are perhaps not yet identified, exercise a pyogenic function without inducing evidences of fever.

These organisms may have escaped through the intestine or through the appendix. I think it most likely that they passed through the appendix and that the abscess was just about to burst into the bowel when I performed the first operation. That the appendix was not directly in contact with the sinus does not prove that this view is erroneous, for seven months passed between the evacuation of the abscess and the removal of the growth, and most appendix abscesses are completely healed six weeks after they are opened. The fistula in this case could not heal, and it naturally followed the straightest course from the cæcum to the skin. The appendix, with the rest of the cæcum, was almost completely shut in by adhesions.

The latest account (October, 1910) of this patient is that he is quite well, his weight varies very little, being 11 stones 1 pound. Before the first operation it was 9 stones, and between the second and third it was 7 stones. In 1906, when he suffered much from indigestion and was unable to take exercise, he weighed 13 stones 12 pounds. Now he is very active and recently walked from Brighton to Mortlake in one day.

Portman-street, W.

[1] Harrison Cripps: Brit. Med. Jour., 1909, vol. i., p. 1286.

## TREATMENT OF A UTERINE FIBROID BY X RAYS.

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LAST year I published some preliminary notes on the treatment of a large uterine fibroid by Roentgen rays.[1] I shall now briefly recall these notes and describe the results of further treatment.

The patient, a single woman, aged 43 years, had been under the care of the late Dr. T. D. Savill for many years on and off for various nasal, gastric, and neurasthenic troubles. She had always suffered from vaso-motor symptoms of a peculiar nature, the pulse was always rapid (about 100), and she had frequent attacks of giddiness, flushing, abdominal swelling, and great prostration consequent on any gastric upset. In 1900 she had profuse hæmorrhage at the monthly periods, a symptom which led to the discovery that she had developed a fibroid tumour of the uterus. Between 1903 and 1905 the tumour grew very rapidly; between 1905 and 1908 she suffered from anæmia and various pressure symptoms, such as sciatica, and on one occasion she was laid up for some months with thrombosis of one leg. In 1903 the tumour could be felt extending up as far as three and a half inches above the symphysis pubis, with greater development on the left than on the right side. In 1903 the measurement at the level of the umbilicus was 30 inches, in 1905 it was 33 inches, and in 1908 it was 36 inches. Hæmorrhage continued to be severe; the patient was anæmic, and had to lead a very quiet life. She steadily refused operative treatment, and the mere suggestion that she should visit a surgeon caused her extreme distress. With a view to steady the nervous system galvanism was administered externally—a descending current to the spine, and also from the spine to the abdomen. She had several courses of this treatment, each course consisting of about 12 to 15 sittings, in the spring and autumn of 1906 to 1909. During and immediately after each course there was much pain at the menstrual period, and more flooding than was usual, but for several months afterwards there was no doubt in the patient's mind that she had less pain and flooding at the periods, and enjoyed better health. Thus, although she felt depressed during the time of treatment, she always returned to request another electrical course.

In May, 1909, the tumour was as high as the umbilicus, with a prolongation of about the size of a large fist extending upwards on the left side. The abdomen then measured 35 inches at the level of the umbilicus. As the patient still refused to see a surgeon I decided to commence treatment with the Roentgen rays, and tried first the method described

[1] Archives of the Röntgen Ray, August, 1909.

by Dr. Albers Schönberg.[2] During May and June, 1909, six exposures were given to each ovarian region. The tube was held at a distance of 38 centimetres from the surface of the body, and a filter was employed consisting of three layers of leather with two intervening sheets of tinfoil, in order to protect the skin by cutting off the soft rays. Altogether three Sabouraud pastille doses, measured 30 centimetres *above* the filter, were administered in 12 sittings. The menstrual period at the end of May was of customary amount, but in June it was very painful, and was preceded by intense discomfort and swelling of the abdomen, and there was more hæmorrhage than usual. The patient stated that the effect of the rays had been similar to that produced at the end of a course of galvanism, but much more severe. In July she had six more exposures. The tube was placed 15 centimetres from the body, and on an average ¾ of a Sabouraud dose (measured above the filter) was given at each exposure. At the end of July the period was accompanied by much pain and swelling of the abdomen, and the hæmorrhage was excessive. It appeared that up to that time the treatment had excited the ovarian function and upset the vaso-motor equilibrium. The patient felt so much mental depression that she refused to have any further treatment for a time. In August the menstrual period was again unusually profuse and painful, but in September the catamenia were slight and almost painless.

In October treatment was resumed, and Bordier's method was employed. In this method the pastille is placed on the skin, beneath the filter, and thus a truer estimate is obtained of the dose which, after passing through the filter, reaches the body than by those methods which measure the dose before the rays reach the filter. Three exposures are given each week by Bordier and each exposure is continued until the pastille acquires Bordier's Tint O. I followed his method as described in the *Archives of the Röntgen Ray* for December, 1909. I gave three exposures a week for three weeks, allowed a week or so to elapse, and then commenced again. I used as a filter a sheet of aluminium ½ millimetre thick. The patient would rarely allow me to give the correct dosage, and the dose at each exposure was therefore less than that prescribed by Bordier. During the sitting she complained of obscure, indescribable sensations, and as my tube worked slowly, taking over half an hour to turn the pastille, she frequently begged me to stop the treatment when only a half or three-quarter dose had been given. There is no doubt that in certain subjects the vaso-motor system is peculiarly sensitive to the static electricity surrounding an excited hard tube, sensitive in a manner never observed with the average individual. In this particular patient, on the afternoon or evening of the day of the sitting, there would often arise symptoms such as headache, mental depression, exhaustion, rapid pulse, and gnawing pain in the neck and ovarian regions.

With the above-mentioned limitations the Bordier method of treatment was administered 16 times between Oct. 5th and Dec. 4th, 1909. The effect of treatment is of interest. For two days preceding the October catamenia the abdomen was much distended, and on palpation I found the tumour was soft and enlarged. The upper part of the abdomen was also distended, but I was uncertain whether this was due to relaxation of the intestinal involuntary muscles or merely to the mechanical displacement upwards of the intestines by the enlarged tumour mass; the constipation present favoured a diagnosis of the former. There was certainly relaxation of the involuntary muscle fibre of the vascular system, the pulse being soft and rapid, as well as a generalised sensation of exhaustion and mental depression. The patient also stated that on some evenings she had swelling of one cheek, lasting several hours on each occasion; but this sign was never present when I saw her in the morning. During these attacks of abdominal swelling the only relief to the gnawing pain and general distress was obtained by a mixture of valerian, ammonia, and spirits of ether. After a slight oozing for a few days all the symptoms disappeared, the swelling decreased, and the tumour felt very hard to the touch, like the pregnant uterus during a "pain." A week later the swelling and general distress returned; the tumour was again large and soft to the touch. After four days the tumour contracted, and the patient felt well and bright for three weeks, except for occasional gnawing pain in the ovarian regions. Then the same symptoms returned with great severity, with nausea and intense mental depression. Slight oozing continued for a fortnight, a sign described by Bordier as having occurred in most of his successful cases after a few months' treatment.

Treatment was discontinued in the early part of December, and she had a profuse period at the end of that month. From the end of December to March 17th she had no hæmorrhage, but the abdomen began to swell towards the middle of February, and continued to do so until a protracted oozing began on March 17th. At the same time she suffered from intense mental depression—a symptom she had never known in her previous life. Mental and physical relief followed the flow at the end of March. When she was again seen by me, early in April, 1910, the measurements of the abdomen were as large as in May and June, 1909. Treatment was resumed on April 8th, 1910. The exposures were given with longer intervening intervals than in Bordier's method, sometimes as much as a week was allowed to elapse, sometimes only four or five days. When the patient complained of vaso-motor symptoms, headache, or abdominal swelling treatment was discontinued until she was better. Between April 8th and July 30th, 1910, she had in all 16 exposures, six over each ovarian region and four over the middle of the tumour. At each sitting the dose varied from ½ to 1 Tint O (Bordier). The history of the patient's condition was similar to that of the previous summer. The flow was absent or slight, with swollen abdomen and general malaise for a few days, followed by relief and contraction of the tumour after the flow ceased. In May and early July the flow was protracted, lasting for over a fortnight; on some days profuse, on most days merely an oozing. There was, however, no mental depression, and the patient felt more braced up than at any time during the previous year. She considered that her general health had improved and that she was less anæmic than of old. The attacks of abdominal swelling were not so marked; the tumour remained longer contracted, and in consequence the abdominal measurements were smaller in the intervals between the swellings than they had ever been in the previous summer.

*Remarks.*—Forty-four sittings have been administered to this fibroid during one year, but only on three occasions has a full dose been given. Bordier describes cases in which a tumour as high as the level of the umbilicus was reduced so greatly that it could be felt only by a vaginal examination, after a course of treatment extending over a year or a little longer. His cases had interstitial fibroids. During the time of treatment his patients exhibited flushing and other symptoms of the menopause, but in none does he mention such extremely severe subjective symptoms as occurred in my patient. It is to be noted that in my case the full dose was so rarely given that it may be reasonably considered that she only received about 20 doses in the 44 sittings. With so small an amount of X rays and with so large a tumour it could not be expected that as good results could be obtained as in the cases recorded by Bordier. Moreover, the prolongation on the upper left side of the tumour in my case points to the presence of more than interstitial fibroid growth. Considering the various drawbacks which made it impossible to carry out the treatment in its entirety, therefore, this case is more successful than it would at first sight appear. The patient is rid of the torture of a monthly or fortnightly flooding, even though the size of the tumour is but little reduced. As she is desirous of resuming treatment later, the final result may be successful.

I have thought it well to publish this at first sight somewhat unsatisfactory case for several reasons. So much interest has been aroused by the remarkable series of cases recorded by Bordier that I have received several letters of inquiry as to the further progress of this patient, the preliminary notes of which were published by request in the *Archives of the Röntgen Ray* last year. Most cases which have been published in full are successful cases; we do not have the records of the technique and signs of the cases which have been failures or only partial successes. There must be many who are working at this subject, and I trust that by writing this paper other British workers may be induced to describe their failures and successes, together with the technique of the treatment adopted in each case. Only thus can we find where our errors lie, which cases are likely to do well with X rays, which to do better with surgical operation. Undoubtedly there is danger in irradiating certain cases. The first effect of the rays is to excite further

[2] Ibid., May, 1909.

hæmorrhage, with consequent risk of life, and death has been reported to have followed in at least one case. Some time ago extirpation of the ovaries was a favourite method of treatment of uterine fibroid, and if we can work hand in hand with the gynæcological surgeon we shall know which cases should be dealt with by operation and which by irradiation of the ovaries.

Harley-street, W.

## A CASE OF URÆMIA WITH FACIAL PARALYSIS AND INTESTINAL ULCERATION.

BY G. PARKER, M.A., M.D. CANTAB.,
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I DO not propose to discuss here the numerous complications of uræmia, but I shall confine myself to those met with in a single patient. The combination in one case of two such unlike things as facial paralysis and severe hæmorrhage from the bowel, and these almost the first symptoms brought to one's notice, well illustrates the difficulties we sometimes find in the diagnosis of kidney disease. The history of the present patient's illness is as follows.

A particularly vigorous, active nurse, aged 37 years, complained to me on Feb. 2nd, 1909, of facial neuralgia which had worried her for a fortnight. She was not anæmic and looked as usual in complete health. Menstruation commenced the same day and was normal. On the 3rd left facial paralysis came on and one eye could not be closed, but she went on with her duties as before. There was no ear trouble or history of sitting in a draught to account for it. However, the next morning she was attacked with slight vomiting and then passed from the bowel two or three pints of bright blood mingled with fæcal matter. It was difficult to see any connexion between the paralysis and the bleeding. There was no sign of purpura and the paralysis was of the ordinary peripheral type. The eye, by the way, could not be closed for a month afterwards. On the 7th menstruation ceased, but after a rectal injection profuse bleeding from the bowel again came on. I could find no polypus, piles, or other source of the hæmorrhage. Another severe attack took place next day, the 8th, after a vaginal and rectal examination by a gynæcologist, who could, however, find nothing amiss except a tender spot in the rectum some three inches from the anus. On the 10th the bleeding finally ceased under the use of adrenalin and other styptics. Vomiting was troublesome during the next week and a pyrexial condition for several days, with some convulsions, came on, but after that she made steady progress towards recovery.

I had noticed that the urine showed a cloud of albumin, but no casts, and it was of 1014 specific gravity. The heart was little if at all enlarged, but her previous history turned out to be important. As a child of 11 she had scarlet fever and diphtheria, and there had been some question of albuminuria afterwards. She had suffered from frequent headaches and nausea, though she was always active and able to work. When 25 she had a good deal of neuralgia and two years later gastric ulceration occurred and lasted on and off for five years. In August, 1908, severe headaches came on, but quieted down after a holiday. In November persistent vomiting in the early morning began and troubled her for some time, but did not interfere with her general health and activity.

A month after her extraordinary attack of facial paralysis and hæmorrhage violent headache and vomiting returned and lasted for some days. The blood pressure rose from 160 millimetres to 180 millimetres, the quantity of urine varied from normal to 100 ounces, and the cloud of albumin continued. No casts were ever found on repeated examinations, and no retinal changes were seen at any time. The anæmia following the hæmorrhage gradually passed away. In May another pyrexial attack appeared, with vomiting and most violent headache, which resisted all the usual treatment for uræmia until we tried venesection to the amount of 20 ounces from the arm, which gave immediate and most welcome relief.

Finally, in August there was a slight return of the bowel hæmorrhage, which was accompanied by considerable griping pain and mucous stools. Boric acid rectal injections increased the pain, but plain hot water ones soon gave relief. She has continued ever since in fair health, but with an increasing blood pressure, which at one time reached 220 millimetres, occasional rises of temperature and frequent headaches, especially if vaso-dilators are given to her.

It seems to me undeniable that we have here a case of contracting kidney which caused neuritic facial paralysis, hæmorrhage from the bowel, and ulceration, as shown by the dysenteric symptoms in August, but the combination of symptoms was most unusual and the activity and recuperative power of the patient are also remarkable.

Now peripheral facial paralysis generally follows a local chill or an ear trouble, and is rarely connected with any systemic disease except diphtheria or small-pox. It does, however, sometimes occur in uræmia, and besides the patient whose history I have given I have recently seen another young woman with chronic albuminuria and high tension pulse in whom this condition appeared for a time. Simpson long ago recorded instances in puerperal albuminuria. Uræmic cases are also mentioned by French writers, and Dr. J. Rose Bradford tells me that he has himself seen an instance without any obvious gross lesion post mortem. There are indeed in uræmic patients so many nervous affections commonly met with that it is curious that this particular form is not more frequently seen. It is difficult to say what is the pathology of this facial paralysis in uræmia, whether it is a toxic neuritis or due to a hæmorrhage or œdema in the sheath of the nerve. In the absence of direct observations we can only suppose that it is produced in the same ways as the ordinary form.

Intestinal hæmorrhage and ulceration have long been recognised as complications of Bright's disease, but well-marked instances are not very common. Of course, hæmorrhages occur commonly enough in kidney disease from other organs than the kidney. Too often they are cerebral, but ocular, nasal, and pulmonary ones are of daily occurrence. The cases of serious rectal hæmorrhage in uræmia which I can recall in my own practice have been in aged persons with probably degenerate vessels. Ulceration of the bowels is found post mortem more often perhaps than the text-books would lead us to suppose. Bright in his paper[1] noticed that among his 100 cases of albuminuria there were 19 in which ulceration of the intestine had taken place, and in 7 of these the large intestine was affected. Still he granted that some of them might be due to tuberculosis. Again, in 1859, Treitz described ulcers of the bowel in nephritis, due, as he thought, to the irritation from carbonate of ammonia excreted through the walls. Stengel favours the theory of the excretion of irritants as a factor at least in their production, since some enteritis is associated with them, but refers to three other explanations: (1) capillary thrombosis; (2) arterio-sclerosis of the local vessels; and (3) submucous hæmorrhages. He remarks, too, that several may coalesce, forming a large ulcerated surface.

Recent writers have confirmed the view that round ulcers of the stomach and duodenum are occasionally due to this uræmic condition. Dickinson,[2] collected 22 cases of ulceration, of which 11 were in the small intestine only, 5 in the large bowel, and 2 in the stomach. He also recorded 8 cases of hæmorrhage without ulceration. In 9 of his 22 cases retinal changes were observed. Granular kidney was present in 14 cases, and a large white one in 2. He pointed out that the symptoms include griping pain, irritation of the bowels, and dysenteric diarrhœa, with the discharge of mucus in some cases, but there may be constipation and occasionally no bowel symptoms at all. Vomiting and hiccough too may be troublesome. The ulcers are commonly of regular outline, circular, and punched out, without any thickened edges. Perforation is common, and there are frequently hæmorrhages and ecchymoses in the neighbourhood. He took the view that the submucous hæmorrhage is the first step in the process of ulceration.

Matthieu and Roux found ulcers most often in young persons from the age of 18 to 25 years. A good account of a fatal case is given by L. G. J. Mackey of Birmingham.[3] The patient was a woman, aged 27 years, with profuse hæmorrhage from the bowel. There was a cloud of albumin in the urine and granular casts. Perforation took place a

[1] Guy's Hospital Reports, 1836, p. 385.
[2] Transactions of the Royal Medical and Chirurgical Society, vol. lxxvii.
[3] Brit. Med. Jour., April 24th, 1909.

week after admission. More than 100 small ulcers were found in the lower part of the small intestine and the cæcum, three of which had perforated. There were numerous submucous hæmorrhages in addition. He considers that the ulcers were due to the invasion of the hæmorrhagic areas by micro-organisms from the bowels. In another case which he mentions a leadworker, aged 28 years, died from cerebral hæmorrhage, but in the intestinal walls were numerous small hæmorrhages with commencing ulceration.

It is important to distinguish these cases from those of the so-called ulcerative colitis, to which Hawkins and others have lately drawn so much attention. In the latter there will be few, if any, signs of kidney disease, and there may be recurrent attacks for many years. Still, it is sometimes a difficult matter to decide which condition we have to deal with.

To conclude, ulceration of the bowel and hæmorrhage from it are important complications of Bright's disease and may lead to a fatal result. When a bowel hæmorrhage takes the place of a cerebral one the patient may have a better chance of recovery if he survives the immediate risks, but if it is due to extensive ulceration the condition is a very serious one.

Clifton, Bristol.

# Clinical Notes:

## MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

### HERNIA OF THE STOMACH INTO THE THORAX.

BY W. A. E. WALLER, M.R.C.S. ENG., L.R.C.P. LOND.,
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ON April 16th, 1910, I was summoned to see a young man, aged 20 years, one and a half miles from Rugby. On my arrival I found him dead. I was given the following history. On April 14th he was well and was spreading manure on a field. He ate a very hearty dinner (his father said he was usually a large feeder), including currant-roll pudding. In the afternoon he drove into Rugby with his father, but began to feel ill and vomited, but he walked part of the way home, carrying some fowls. He vomited several times during the evening and the night, and though he felt better on the morning of the 15th he lay about all day and took only milk and broth. He had an action of the bowels after taking salts. He slept well during the night of the 15th as far as his father (who slept in the next room) knew. At 8 A.M. on the 16th he had some hot milk, and later some coffee and brandy. At 9 A.M. the father went up to him and found him rather cold. At about 10 A.M. he died. On my arrival the only noticeable thing was the dark fluid (of the colour of bismuth stools) running from the nostrils.

On April 17th I made a post-mortem examination. More of the same coloured fluid was running from the nostrils. On opening the body there was apparently nothing wrong with any of the abdominal organs. On removing the chest-piece the right lung was found to be very voluminous, and the left cavity of the thorax was equally fully filled with something which was evidently not lung. Further investigation found the left lung to be of about the size of an average spleen quite compressed at the upper and inner side. The heart was firmly contracted and rather more towards the middle of the chest than usual. I then found that the whole of the stomach, except just the pyloric end, had passed through the œsophageal opening in the diaphragm into the left cavity of the thorax. There seemed to be no constriction, as the opening admitted three fingers easily. It contained a large quantity of the same blackish fluid mentioned as running from the nostrils, with the currants floating about, and other semi-digested food. The mucous membrane was deeply congested. The small intestines were mostly rather contracted, containing practically no fluid and only a little solid.

The parents did not send for help earlier because the son had a sick attack at Christmas which passed off in 24 hours. He had had no illness that I could hear of, but five years ago a heavy but empty farm cart passed over his left chest which necessitated a five weeks' stay in our hospital. I cannot hear that any definite lesion was discovered, but for several days he had an evening temperature of 101° F., and for several more only a degree less.

The patient was passed into a Foresters' Lodge a year or so after his accident, which I think could not have happened had the state of his chest been as I found it after death.

Rugby.

### A CASE OF RICHTER'S HERNIA STRANGULATED IN THE OBTURATOR CANAL.

BY H. LEWIS BARKER, M.B., B.S. LOND., M.R.C.S. ENG., L.R.C.P. LOND.,
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THE patient, a man aged 61 years, was sent up to St. Mary's Hospital on the night of Jan. 10th as a case of intestinal obstruction. He gave the following history. On the afternoon of Jan. 7th—that is, three days before admission—he was seized with sharp pain in the pit of the stomach. The pain was very sudden in its onset, but passed off to some extent so as to allow him to continue his business. He was not sick at the time. On the following day the pain was still present, but was of a gnawing character, and he had to discontinue his work. On the next day, the 9th, he was sick several times, and the vomited matter became brown in colour and offensive. His pain got easier towards night. On the morning of the 10th, before admission to hospital, he was given a rectal injection, but in spite of this his bowels were not open. He was sick about six times, and later his pain got much better. He said that he had always enjoyed good health previously to the present illness and that he was not constipated as a rule.

On admission his condition was as follows. He complained of slight gnawing pain in the abdomen. His countenance, however, was composed and cheerful. The temperature was 98° F. and the pulse was 88. The tongue was furred. The patient's abdomen was not appreciably distended and moved well on respiration. It was quite soft and there was no tenderness on palpation. The most prominent feature was the presence of visible peristalsis in the epigastrium from left to right. The patient being a thin man, this peristalsis was very obvious and striking. A rectal examination showed nothing abnormal to be felt in the pelvis. On the next day the abdomen was more distended, and besides the epigastric peristalsis there was also plainly seen peristalsis due to the small intestine, which made the abdomen assume a characteristic "grid-iron" appearance. There was no fulness in either flank. The patient was sick three or four times, the vomited matter still being brown in colour but not exceedingly offensive. An enema was given at night with a fairly good result. Until this time the bowels had not been open for six days. An analysis of the stomach contents showed that there was no free mineral acid. The total acidity was 0·07 per cent. There was no lactic acid and the ferment activity was low.

On Jan. 13th a laparotomy was performed by Mr. Clayton-Greene. An incision was made along the right linea semilunaris, commencing above the umbilicus. The pyloric region of the stomach was first explored and found to be normal; the rest of the stomach was also found to be normal. The cæcum was not distended. The small intestine, however, bulged into the wound and was distended and appreciably hypertrophied. The distended portion of small intestine was followed out and led to the left iliac fossa, when it was seen that a portion of the circumference of the gut was herniated into the left obturator foramen, and anchored there by recent adhesions. The hernia was reduced and the bowel washed with hot saline solution, when the intestine immediately showed signs of recovery. The peritoneal sac was drawn out of the foramen, but it was not possible to attempt a radical cure through the existing incision. In fact, during the operation the incision had to be enlarged till it was 8 inches in length, and even then it was difficult to manipulate the hernia, though a good view was obtained by turning up all the coils of intestine from the pelvis. The left obturator foramen was much larger than the right and admitted the tip of the finger. The efferent portion of small intestine was shrunk and perfectly empty. The incision was closed without drainage and healed perfectly.

The patient made an uneventful recovery and was discharged from the hospital on Feb. 10th. It is interesting t

record that he was again in hospital in April for a femoral hernia on the left side, for which a radical operation was performed, and he left the hospital cured at the end of the month. At the present time (October) the man is perfectly well and is able to take an active part in his business, which is that of a printer. I have to thank Mr. W. H. Clayton-Greene for permission to publish this case.

*Remarks by* Mr. CLAYTON-GREENE.—The special features in this case were: 1. The appearance presented by the patient of chronic obstruction in the small intestine. 2. Marked peristalsis of the stomach, suggesting a pyloric stenosis in addition to the blockage of the small gut. I was surprised to see gastric peristalsis so marked when the obstruction was so far from the pylorus. 3. The variety of the condition. Obturator hernia is so much commoner in women, in the proportion of 63 to 4 (Macready). Richter's variety of strangulated hernia is itself uncommon and the association of the two must be very unusual.

So far nothing has been done to prevent recurrence beyond reducing the sac by traction from the peritoneal cavity. The obturator opening on the left side easily admits the tip of the index finger, and it is reasonable to expect a recurrence of the condition. It seems feasible by making an incision parallel with and above Poupart's ligament to dissect down extraperitoneally to the obturator foramen and to block the opening with a flap of the obturator internus muscle.

# Medical Societies.

## MEDICAL SOCIETY OF LONDON.

*Metal Drains in Chronic Abscess of Bone.*

A MEETING of this society was held on Oct. 10th, Mr. CHARTERS J. SYMONDS, the President, being in the chair.

Mr. SYMONDS delivered the presidential address on the Treatment of Chronic Abscess of Bone by means of Metal Drains. Before commencing his address he referred in sympathetic terms to the loss sustained by the society through the death of the late treasurer, Mr. J. Langton. The President then proceeded with his address and said that his object was to exhibit the results of treating the effect of central osteitis by metal drains. In some cases there had been a typical chronic abscess, in others the patients had shown a sinus leading into the centre of the bone. That sinus in some instances was the result of an acute or subacute osteitis occurring in early life, in others in adult life. Incidentally, it appeared that a greater number of the cases were the result of septic infection than was supposed to be the case. There was little or nothing in medical literature as to the after-treatment of these cases. The evacuation of an abscess by means of the trephine or gouge, or the enlarging of a bone sinus and the cleaning out of a central cavity were simple enough procedures and need not detain them. His concern was with the after-treatment, for in his own hands up to the employment of metal drains that stage was prolonged, unsatisfactory, and sometimes disastrous as regards the neighbouring joint. The wall of a chronic abscess of long standing was hard and smooth; there was, in other words, a barrier of dense bone. Unless that was removed by operation—an unwise proceeding—it took some time to undergo rarefaction by osteitis, during which time effective drainage was required to prevent decomposition. The difficulty in maintaining drainage was due to the closure of the orifice by periosteal growth. A metal drain prevented that and at the same time did not itself lead to irritation as did a rubber drain or a gauze packing. Those latter methods, especially in hospital patients, were notoriously difficult to maintain, and local septic infection almost always occurred. That led to a chronic osteitis, to the retention of pus from time to time with general septic infection, and almost always to secondary changes in the neighbouring joint. Again, for the process of recovery and for the closure of the cavity it was necessary that the enlarged bone be remodelled and restored to its normal size, a process taking under the most favourable conditions some months, and in others one or two years. The question he raised was what was the best method of dealing with a chronic bone abscess after the pus had been evacuated, or again of dealing with a case of acute or subacute central osteitis either immediately or if encountered some months or years after evacuation of the pus? With regard to chronic abscess, where the infective activity had long ceased and the pus acted more as a foreign body, the ideal method no doubt was to close the cavity after rendering it aseptic. The compact layer of bone that limited these old cavities had suggested to more than one worker the possibility of applying the method of dentistry, employing, however, an absorbable filling. Blood, bismuth, bone, and later a preparation containing iodoform in spermaceti had been employed. The difficulty of securing perfect asepsis was obvious. In the infective varieties where pus formed quickly—i.e., in a few days, or as in one instance three weeks—it was unlikely that an aseptic condition could be brought about. Nor would it be possible to remove all the septic products in those long-standing cases of sinuses with thickened bones. His own experience of attempts to close chronic abscess and of inserting periosteal flaps had not been successful, but he hoped that others might contribute some better experience of those methods of treatment. He must be content in putting before them a short summary of a method of drainage not much in vogue, though he thought by no means new, which had in his hands proved of the greatest value. Acting on the belief that there must be a discharge of pus until the enlarged bone had been restored by slow absorption and reconstruction to the normal size, a metal drain had been retained until that had taken place. It would be shown that a patient could carry on his work with a large drain in the femur or in the lower end of the tibia and that he could attend to the cleaning and management of the tube. Full use of the limb rather promoted than retarded recovery; the silver or aluminium gave rise to no irritation of the skin, and effectually prevented the retention and decomposition of pus and so the spread of osteitis and the slow general septic absorption which led to such depression of general health. The tubes had been made of silver, German silver, and aluminium. In the case of the last-named metal the flange must be riveted to the cannula. It would last a long time and was somewhat cheaper than silver, but was not quite so nice a material for the purpose. Lead in default of anything else would answer. The size should bear some proportion to the cavity. Theoretically it should equal the diameter, but that was unnecessary. In a large cavity a diameter of half an inch was sufficient. In the smaller cavities it was well that the diameter should be of a larger ratio to the cavity. After a year the tube could be reduced in size, the reduction depending upon the extent to which the bone had moulded down. Finally, a rod of metal having a flat nail head was worn for some time, or for cheapness a length of silver wire with the end turned over. The duration of drainage was also influenced by the localisation and the nature of the case. The duration of the drainage was, however, of less moment if the patient could go about his work and if the wound be kept free from septic changes. The age of the patient was also an important factor. From the pathological standpoint it would be noticed that nearly all the cases of Mr. Symonds were due to some form of acute or subacute infection. There were the cases of acute necrosis of early life, limited in some to one bone; in others several bones or other parts were involved; there were two cases of subacute infection, in both of which the lower third of the femur was the part affected, and in both there was a history of very slight injury. As to the cause of such cases one could in the absence of bacteriological evidence only speculate. Probably a staphylococcal infection might explain such cases or the bacteria of pneumonia or influenza. Those were interesting cases of multiple lesions in the same bone suggesting a widespread but attenuated infection, so mild that it might lie almost dormant for years, and give rise at intervals to local abscess over a period of 20 years or more. There were cases of long-standing sinuses with enlargement of the bone from a chronic septic osteitis and periostitis associated in some with secondary joint changes, and all examples of acute disease in early life. In those perhaps one saw the most striking results from the metal drains. In regard to tuberculous cases Mr. Symonds had had several cases sent into hospital for tuberculosis appearing on a superficial examination to be of that nature, but which proved to be due to other causes. He thought in all probability a good many such conditions had

been set down to tubercle without sufficient evidence. The error was due, he thought, to the need of some other and reasonable explanation for the recurrence of abscesses and necrosis throughout a period of 10 or 20 years. Mr. Symonds suggested that those foci were all deposited during the initial attack of acute osteitis in early life and had remained more or less dormant. Those foci were never really quiescent, for a slow, painless osteitis associated with organisation was constantly going on. Some day the surface was reached and then there was pain. The protective layer of dense bone forming the wall of those old abscesses was the best evidence of chronicity.

Sir W. WATSON CHEYNE said that in dealing with septic cavities one method was to try to render the cavities aseptic, but his experience was that that was a very difficult thing to do. Another method which he recommended was to cut away as much bone as possible, so as to let the soft parts lie on the bottom of the cavity. If this procedure were not possible then recourse must be had to drainage, but there was a chance of the drain becoming plugged up and of further trouble ensuing. He was much impressed with Mr. Symonds's metal tubes, as the troubles with other methods of drainage were very great. Indiarubber drainage-tubes were of no use, as it was not possible to keep them in place, and if holes were made in them granulation tissue formed and blocked the orifices. If he (Sir Watson Cheyne) could not cut away and level down the bone as he had described, then he would certainly try the method shown them by Mr. Symonds.

Mr. A. E. BARKER said that they would be encouraged to persevere in the use of bismuth paste, which could reach the furthest ramifications in a bone cavity. The material appeared to act as a germicide and as a kind of framework for the growth of granulation tissue until the whole cavity became organised.

Mr. A. PEARCE GOULD said that the ideal treatment was by means of very patient and laborious operation to eradicate the whole of the affected area and flatten down if possible the dense wall of the abscess so as to secure a sound healing from the bottom, but if long drainage was required in any case then it appeared to him that the metal tubes used by Mr. Symonds would be most useful. He (Mr. Pearce Gould), however, hoped that the impression would not get abroad that in these cases it was sufficient treatment to drain by means of a metal tube for an indefinite time, because the great desideratum was eradication of the disease by a primary operation.

## BRIGHTON AND SUSSEX MEDICO-CHIRURGICAL SOCIETY.

*Presidential Address.—Exhibition of Cases and Specimens.*

A MEETING of this society was held on Oct. 6th, Dr. F. HINDS of Worthing, the President, being in the chair.

The PRESIDENT delivered an address on Exophthalmic Goitre. He drew attention to the recent dictum of Professor Kocher, who stated that it was the duty of all practitioners to submit cases of this disease to operation at an early stage. The speaker contended that in order to make this a reasonable course of action it was necessary to regard Graves's disease as progressive, going on to the death or disablement of the subject of it. But was this the usual course of the disease? He believed not, and in support of this he drew attention to the after-history of 17 cases which he had watched for several years. Two were dead; both were women in whom the illness commenced about the menopause. In one valvular incompetence came on, followed by dropsy and death. The other died from acute mania. Of the others, one, an acute case in a young boy, was lost sight of, but a year after he was last seen he was said to be much improved. Another, still under observation, had mental symptoms from time to time, and insanity was feared. There were five young cases, all of whom had so far recovered as to be able to earn their living. Of the older cases, one, a man, completely recovered in about a year; the females were all well so far as heart symptoms went, and able to take their place in ordinary family life. One of them had an attack of mania, was in an asylum for about 18 months, but now showed no sign of Graves's disease. So far as these examples went he was entitled to say that they showed that a large majority of the cases of this disease got well spontaneously or as the result of medical treatment. He had never seen a necropsy on a patient dead from exophthalmic goitre, except as the result of an operation; with the exception of the patient mentioned, who died from heart disease, he had never signed a death certificate from this cause. As there was a considerable risk attaching to the operation, and as resulting improvement was by no means certain, were they justified in accepting Professor Kocher's ruling and submitting all cases to early operation?—In the discussion which followed all the members agreed with the view held by the President, and deprecated an early resort to surgery in the treatment of exophthalmic goitre.

The following cases and specimens were shown:—

Dr. W. WILLIAMS demonstrated the beneficial results of Mercurial Inunctions in a man with Localised Scleroderma. The patches were much softer after a course of these inunctions.

Dr. WALTER BROADBENT showed a case of Internal Hydrocephalus caused by cerebral tumour; trephining had been performed by Mr. H. H. Taylor, but no tumour found. For the last three months a needle had been inserted into the lateral ventricle through the trephine wound and two drachms of fluid let out every other day. Great improvement of the symptoms had resulted.

Dr. L. A. PARRY and Mr. W. B. PROWSE showed skiagrams of a child with Congenital Deformities of the Bones. There was shortening of the leg, due to want of development of the femur, with an absence of the upper two-thirds of the fibula. The latter, unlike the majority of these cases, had caused no club-foot.

Mr. PROWSE exhibited skiagrams of a patient with Congenital Lateral Deviation of the Fingers, with lax joints and webbing of the fingers.

Mr. GEORGE MORGAN showed a baby with Hernia of the Ovary. He had had six similar cases, and believed the organ was always cystic, and therefore should be removed at the time of operation. He also showed a Fibrous Nodule removed from the soft tissues of the thumb, which had caused very great pain. An X-ray photograph seemed to point to periosteum as the origin of the nodule. It was suggested that it might be a neuroma.

ÆSCULAPIAN SOCIETY.—A meeting of this society was held on Oct. 7th, at which Dr. Leonard Williams, the new President, delivered an address on Some Further Aspects of Obesity. He said that recent investigations have served to throw a good deal of much-needed light on some of the intricacies of this rather difficult but ever-present question. Obesity has been defined as a "vice of metabolism," a definition which has the merit of being altogether indefinite and the disadvantage of committing the definer to nothing upon which he may be impaled. In ordinary obesity the vice is not in the metabolism, but in the metaboliser, who eats too much, drinks too much, excretes too little, takes no exercise, and wears flannel next his skin. When we come to the class which includes hereditary obesity, congenital obesity, asexual obesity, and the like, we are brought face to face with physiological problems of absorbing interest which, until they are solved, must always constitute corpulence one of the reproaches of the therapeutic art. The condition first described by Jonathan Hutchinson as lipomatosis universalis asexualis is clearly due to the absence or withdrawal from the economy of the internal secretions of the ovaries and testes. Both these extracts are believed on good experimental grounds to be anabolic—that is, to reduce or retard metabolism—and yet their complete withdrawal produces in either case so high a degree of anabolism as to be rightly regarded as pathological. The only two animal extracts which we know to be capable in certain circumstances of reducing corpulence are thyroid extract and pituitary extract. But in the case of the thyroid, while admitting to the full its katabolic power of stimulating certain forms of metabolism, it is certainly not imbued with that special hatred for fatty tissue with which it has been credited. Many patients who have been benefited by thyroid extract have really been suffering from myxœdema due to a minor degree of thyroid inadequacy. Pituitary insufficiency may give rise to a state of pseudo-obesity resembling that arising out of inadequacy of the thyroid. Obesity is often associated with chlorosis, and this form is related to, though it is probably not identical with, the type of obesity which is so liable in the female sex to occur at puberty, in connexion with marriage, and after maternity, and is consequently due to some internal secretory cause. In the case of maternity the cause may be the internal secretion

of the mammæ, which is believed by some to be very active. In connexion with marriage Mr. Arbuthnot Lane holds the view that the prostatic fluid of man is essential to the full normal physiological development of woman, to point to an explanation of post-marital obesity, which is by no means unlikely to be correct.

NEWCASTLE-ON-TYNE CLINICAL SOCIETY.—This society commenced the work of the winter session on Oct. 6th, meeting in the Geographical Institute. The business of the meeting was the installation in the chair of the President-elect, Dr. E. Napier Burnett, by the retiring President, Mr. J. W. Leech, who in well-chosen sentences formally introduced Dr. Burnett to the society. Dr. Burnett then took the chair and delivered the Presidential address on "Obstetrics in Relation to Some of the Allied Sciences." The lecturer gave some introductory remarks, pointing out the various ranges of normality in analyses of the urine from the standpoint of the nitrogen excreted in relation to the food intake in healthy individuals. He then proceeded to discuss quantitative and qualitative changes in the nitrogenous excretion of pregnancy. He pointed out that there were few cases in which the urine remained normal in this particular, and outlined the symptoms shown by patients of various types through a slight qualitative change, and through what he described as a pre-eclamptic change, up to extreme cases of eclampsia. He urged the necessity of medical men making something more than a mere cursory examination of the urine at odd times in pregnancy, and being content if there were no albumin present. He pointed to the need for eliminative treatment in the pre-eclamptic phases, and sketched a parallel between such cases and acetonæmias and subacute degenerations of the liver. The address was full of suggestive ideas and was received with enthusiasm.

# Reviews and Notices of Books.

*A System of Medicine, by Eminent Authorities in Great Britain, the United States, and the Continent.* Edited by WILLIAM OSLER, M.D. Oxon., F.R.S., Regius Professor of Medicine in the University of Oxford; assisted by THOMAS MCCRAE, M.D., F.R.C.P. Lond., Associate Professor of Medicine and Clinical Therapeutics in the Johns Hopkins University, Baltimore. Vol. VII.: Diseases of the Nervous System. The Oxford Medical Publications. London: Henry Frowde and Hodder and Stoughton. 1910. Pp. 969. Price 30*s.* net per volume, or 24*s.* net per volume to subscribers.

WITH this, the seventh, volume the System of Medicine of Professor Osler and Dr. McCrae is completed, and the editors are to be congratulated on rounding off their arduous task with so excellent a production. The specialty of neurology has now become so large that it is no easy matter to compress into less than a thousand pages a series of authoritative articles by American and English experts on the multitudinous diseases to which the nervous system is subject. The contributors have, without exception, exercised a most praiseworthy self-denial in their determination to attain conciseness, for, as all who are familiar with neurology are aware, there are so many affections in regard to whose nature and pathology finality has not been reached that it is difficult to give an adequate account of them without alluding to various opinions in detail, and this inevitably lengthens the descriptions. The general impression we get from a perusal of this seventh volume is that it supplies an admirable account, alike in compactness and completeness, of present-day knowledge of nervous disease. Where all is so good it is perhaps invidious to single out any contributions in particular, but we should like to refer especially to the scholarly chapter on apoplexy from the pen of Dr. Henry M. Thomas, and to Dr. Smith Ely Jelliffe's critical study of hysteria.

The classification that has been adopted is on somewhat original lines. An attempt has been made to include as much as possible in such comprehensive subdivisions as "diseases of the motor tracts," "scleroses of the brain," "diseases of the meninges," "diffuse and focal diseases of the spinal cord," "combined system diseases of the spinal cord," "diseases of the peripheral nerves," and so on, but while the method has much to commend it, it may give rise to an erroneous conception of the degree to which systematisation of neurological knowledge has progressed. Thus, under the first of these, diseases of the motor tracts, we find described peroneal muscular atrophy, in which condition the posterior columns, not to mention other non-motor structures, are constantly affected, and, more curious still, the progressive hypertrophic interstitial neuritis of Dejerine and Sottas, in which disease the lesions of the cord are similar to those of tabes, while the changes in the nerves are just as marked in sensory as in motor fibres. It is unfortunately the case that the nature of not a few nervous affections is still undetermined, and therefore premature systematisation is to be deprecated.

The most recent advances in neurological science—we may mention, for instance, those in connexion with the subjects of acute poliomyelitis and serous meningitis—have all been incorporated, and throughout there is a refreshing novelty in the way in which the matter is presented to the reader. This effect may in particular be produced upon the English reader and be due to the *personnel* of the contributors, 13 out of the 16 whose names appear at the head of articles belonging to the United States and Canada; in any case the value of this treatise, to the comprehensiveness of which allusion has already been made, is increased by the bright and interesting manner in which the subjects are handled. The paragraphs devoted to a historical summary of the various diseases dealt with are often very instructive. An excellent index is given at the end of the book, as well as a general index to the whole seven volumes.

We have no hesitation in saying that the seventh volume of the "System" is a credit to English and American neurology, and anyone who desires a succinct yet detailed account of nervous disease will find it here, together with adequate appreciation of, and reference to, the work of other authorities.

*Medical Examination of Schools and Scholars.* Edited by T. N. KELYNACK, M.D. Vict. London: P. S. King and Son. 1910. Pp. 434. Price 10*s.* 6*d.* net.

THIS book is made up of a series of chapters by different authorities on almost all aspects of school medical work. Not the elementary schools alone, but the secondary and public schools are touched upon, and there are chapters also upon medical examination in the schools of Australia, Canada, and New Zealand, America, France, Germany, Switzerland, and Scandinavia.

An even cursory reading of this volume should enable anyone to see at once the weak and the strong points of the present system; while for those who wish to get a grip of practical methods for working purposes some of the articles are admirable. For this latter purpose the second chapter on the Organisation and Administration of the Medical Examination of Schools, by Dr. George Reid and Mr. J. Priestley, and the third chapter on the Organisation and Administration of the Medical Examination of Scholars, by Dr. W. J. Howarth, are both good and useful, and should give anyone coming new to the work a sound knowledge of what is expected and what is desirable. On this subject, however, Dr. Clive Riviere's article on the General Routine Medical Examination of School Children is particularly excellent and will be recognised by anyone with any experience in such examinations as embodying just those principles which assure smooth working and efficiency. Dr. Clive Riviere's observations on the heart of the school child will be most valuable to school medical officers as the conditions found are apt to be very perplexing, and his

hint as to the avoidance of strain is suggestive. We think it, however, possible that a good many of the heart conditions found in elementary school children may be themselves signs of some degree of chronic malnutrition, which affects a considerable proportion of children in the poorer quarters of large towns. Finally come the statements that "a pleasant relationship to child, teacher, and parent is essential to the success of the school doctor. He is placed in the school not only to collect facts, not solely to learn, but also to teach and advise" the teacher, the parent, and the child, the former "in the application of the laws of health," and the latter "in the value of personal hygiene"; and these might well form part of the preliminary instructions sent to every school medical officer on first beginning work.

The weak points of the system of medical inspection are made clear in several chapters. The first, which deals with the Correlation of the School Medical Service and the Public Health Service, by Dr. Edward W. Hope, does little more than make this weak point obvious, as the author does not suggest anything except the desirability of coöperation, and brings forward no definite suggestion as to how this coöperation is to be attained. In Chapter IV. Dr. Clement Dukes draws attention to one of the anomalies of our educational system, the fact that masters in public schools have very usually no training in teaching and no knowledge of hygiene. It is curious to think that our free elementary schools will soon be better equipped in these ways than our most expensive public schools.

Among other weak places in our system are the schools for mental defectives, who are given an elaborate and expensive education up to the age of 16 and then turned adrift on the world for whose struggle they are unfitted. As Mr. A. F. Tredgold says, this course of conduct can only be regarded as "the height of folly." Another serious defect in the general system is revealed in the case of Poor-law, orphanage, and reformatory schools. These institutions seem to be quite inadequately inspected—a very serious condition that should be promptly remedied. One chapter is missing that we should have liked to see—that on the school treatment of epileptics. This particular class at present, it seems, is left to take its chance without any special institution to help it. Other useful articles in the book are that by Mr. George Foggin on the Eye and Eyesight of School Children, that by Dr. Lewis Williams on School Clinics, and that by Dr. J. Lambert on Feeding the School Child. The examination of ears and hearing proposed by Mr. Arthur H. Cheatle seems to us over-elaborate if proposed to be done in the schools, although excellent if proposed to be done at some special centre by the expert, after the school medical officer has done the usual routine examination.

The establishment of school clinics as outlined by Dr. Williams would, among other desirable things, provide us with a centre at which all kinds of special and detailed examinations could be carried out. School clinics have been already established at Bradford, Bow, Brighton, Cambridge (teeth only), Sheffield, and Southampton. We are not told much about the clinics except in the case of Bradford, which treats ringworm, impetigo, scabies, ear discharge, dirty and sore heads, defective vision, and sore eyes. Probably all clinics will have to treat a good deal of this kind of ailment, and it is certainly not a field in which there will be, for the poor class of children treated, much possibility of interference with the work of the general practitioner. Nevertheless, the treatment of these conditions in school clinics should make a great difference in the level of school health, and the same may be said for another department of the work, the use of the clinic for purposes of diagnosis in doubtful cases and the certifying of children recovered from zymotic diseases as free or otherwise from infection. Dr. Williams makes an interesting suggestion of the possibility of "flying clinics" visiting country districts.

Altogether the "Medical Examination of Schools and Scholars" will be found full of suggestion and of interest.

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*Tropical Medicine and Hygiene.* By C. W. DANIELS, M.B. Cantab., M.R.C.P. Lond. With a chapter on Snakes, by A. ALCOCK, C.I.E., M.B. Aberd., F.R.S., Lieutenant-Colonel, I.M.S. In three parts, with coloured and other illustrations. Part II.: Diseases due to the Metazoa. London: John Bale, Sons, and Danielsson, Limited. 1910. Pp. 283. Price 7*s.* 6*d.* net.

WE had the pleasure of reviewing the first part of this treatise, which deals with the protozoa in connexion with tropical diseases, in THE LANCET of June 25th, 1910, p. 1762. The present volume deals with those due to the metazoa. Lieutenant Colonel Alcock has added a chapter dealing with snakes. Major E. Wilkinson, I.M.S., who was responsible for part of the subjects contained in the first volume, has been precluded from any share in the work under review owing to his absence from the country.

In this, as in the former volume, we find a concise description of the diseases due to various kinds of parasites, of the manner in which they spread, and the rationale of the preventive measures advocated. After an introduction, in which the etiological relation of the metazoa to disease is briefly indicated, the platyhelminths are first considered. This class comprises the turbellaria, the trematoda or flukes, and the cestoda or tape worms. Their anatomy, illustrated by some excellent plates, is succinctly given. In the remarks on bilharziosis we note that as regards treatment the author has not found any benefit from the administration of methylene blue, a drug recommended by Lieutenant P. S. Lelean, R.A.M.C., in 1902. Dr. Daniels not only considers it useless, but harmful, as it may cause renal trouble. With respect to the question as to whether or not there are two species of parasite included under the description of the worm responsible for the disease, the author holds that the balance of opinion is in favour of a second species. The chapter on tapeworms is excellent; we note especially the excellent plates with which it is illustrated.

The nemathelminths are next considered; these include the nematodes, nematamorpha, and the acanthocephala. The diseases for which the nematodes are responsible include the various forms of filariasis; here the student will find all the main facts relating to chyluria and elephantiasis; the treatment advocated is quite up to date. The author considers the method of lymphatic drainage by strands of silk, so as to establish passages in the subcutaneous tissues, connecting one lymphatic system with another, of some promise. Castellani's practice of combining the removal of longitudinal wedges of skin with the use of fibrolysin is held not to admit of any definite opinion as to its value, owing to the want of sufficient experience. An excellent table is given of the differential characteristics of the various forms of filaria. In the treatment of guinea worm the author considers the methods of dropping cold water on to the part affected, of extraction by gradually withdrawing the worm on a piece of wood, and the method of injecting perchloride of mercury. A modification of this has very recently been advocated by Lieutenant H. W. Acton, I.M.S., who has employed the subcutaneous injection of chinosol with success in 18 cases out of 19, the disadvantage of the perchloride being the formation of an insoluble mercury albuminate on contact with the tissues. In the etiology of guinea worm Leiper's researches are noted. Trichinosis is duly considered; in the prophylaxis of the disease due stress is laid on the importance of thorough inspection of pork

before it is issued for consumption. In this connexion the admirable practice in vogue in Berlin occurs to the mind, where, when the pigs are killed and the bodies scalded, sections are at once made and examined microscopically at a large central institute. The subject of ankylostomiasis follows. Its symptoms, the characteristics of the ova, the prognosis, morbid anatomy, and the treatment are fully shown, and the cautions with reference to the use of thymol are not forgotten. The researches of Looss as to the mode of entry of the worm into the human organisms are related, whilst due stress is laid on the necessity of prophylaxis.

After the ascaridæ have been considered the author gives some useful diagnostic criteria of the various entozoal infections, with a plate illustrative of the different ova, the respected measurements of which are tabulated for comparison. A *résumé* of the prophylactic methods necessary against the various parasites that have been described next appears, and it is pointed out that in considering prevention of parasitic infections we have to take into account the following incidents in their life-histories: (1) how the parasites, eggs, embryos, or larvæ leave their host (man); (2) what happens to them afterwards; and (3) how they re-enter their host (man). This chapter is one of the most valuable in the book. Dr. Daniels concludes his work with an account of the morbid effects due to leeches, arthropods, and diptera, whilst myiasis, nasal, intestinal, and dermal, is fully discussed.

We then come upon a feature that has hitherto been wanting in treatises on tropical medicine. This has been supplied by Lieutenant-Colonel Alcock in the chapter on snakes and snake venom. In this he describes the general zoological characters and classification of snakes; the venom apparatus and venom of the thanatophidia; the treatment of snake-bite in theory and practice; and, lastly, the genera and species of venomous snakes and their geographical distribution. A vast amount of useful information is condensed in this chapter, which should be most valuable to medical men in India, contributed, as it is, by an officer of the Indian Medical Service who is so well known for his scientific work. Altogether the present volume fully sustains the reputation of its predecessor in every way.

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*Die Individualisierende Operation der Inveterirten Scheiden-Damm-Mastdarm-Risse* (*The Individualisation of Operations for Tear of the Pelvic Floor.*) Von OTTO KÜSTNER. Mit 7 Tafeln und 10 Abbildungen. Jena: G. Fischer. 1909. Pp. 36. Price 3.50 marks.

THE multiplicity of the operations for the repair of tears of the pelvic floor is well known and is exemplified in some of the more modern American text-books, in which not uncommonly large numbers of them are described. Every gynæcologist who meets with many of these cases has his favourite method of procedure, and the principles upon which they are based are equally numerous. Nor is this surprising when we remember the great differences of opinion which exist even among anatomists as to the relative value in supporting the pelvic viscera of the different structures forming the pelvic floor. Professor Otto Küstner is no exception to the rule, and in this work lays down very clearly and dogmatically what he conceives to be the best method of dealing with these cases. The book is illustrated by some simple diagrams and a number of stereoscopic photographs, so that the description in the text is easily followed. As is almost invariable, the author condemns most operations but his own, and is very severe upon the time-honoured flap-splitting method of Lawson Tait—an operation which we must confess we favour, and from which we have seen very excellent results ensue.

Professor Küstner points out the well-recognised fact that practically every tear of the perineum takes place to one or other side of the middle line, and he further points out that as the tear heals with the formation of scar tissue the two halves often become markedly displaced and the anatomical relations distorted by the shrinking of the scar tissue. Since the amount of tearing and distortion of the two sides is very unequal, all the ordinary methods of suture, according to the author, fail, as they take no notice of this inequality, and therefore any raw surface if formed symmetrically may result in the removal of too much tissue on the one side and of too little on the other. For this reason he maintains that every injury must be treated on distinct lines of its own, and the first essential is to remove all the scar tissue and to restore the condition of things to that present at the time of the tear, before healing and disfiguration by the formation of scar tissue took place. The original wound in this way having been reproduced perfectly, the corresponding portions of the torn tissues must then be carefully defined, and if necessary isolated—for example, the sphincter ani muscle—and sutured accurately together. In this way alone is it possible to replace the parts in their original anatomical relations and completely to restore their functions.

It is important to bear in mind that after a perineorrhaphy the patient is very likely to bear further children, and the endeavour of the surgeon should be directed to forming a perineum which will stand the test of childbirth without necessarily giving way again. Full details of the special technique employed by the author are given, and by his method he maintains that the worst lacerations can be made to heal without any trouble; at least, so an experience of 20 years has taught him. Undoubtedly, the method has given good results in Professor Küstner's own hands, and the perusal of this clearly written and excellent little monograph should allow others to practise this procedure with a good measure of success.

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*Operations upon the Uterus, Perineum, and Round Ligaments.* By W. J. STEWART MCKAY, M.B., M.Ch., B.Sc. Syd., Senior Surgeon, Lewisham Hospital for Women and Children, Sydney. With 148 plates. London: Baillière, Tindall, and Cox. 1909. Pp. xvii.–454. Price 21s. net

THE author has written this book with the object of pointing out how the obstetrician should deal with immediate lesions of the vagina and perineum, and, in the next place, to describe how these lesions when neglected may be dealt with later by the operator, whether he is a general practitioner or specialist. He thinks that the old idea that the perineum is a keystone and the supporting structure of the vagina and uterus is still firmly rooted in the minds of a great many members of the profession. We hardly think the present-day practitioners, at any rate those who are in the habit of performing gynæcological operations, are so ignorant as the author imagines, but it is with this idea in his mind that he has written this work of some 454 pages, mainly on operations for lesions of the perineum and for the various conditions, such as cystocele and rectocele, commonly associated with prolapse. It is true that 110 pages are given up to a consideration of the operation of curettage, which no doubt is somewhat abused at the present day, but the practical abuse of this simple and undoubtedly useful operation is certainly more than equalled by the author's abuse of his reader's patience. We are glad to remember that the majority of writers on gynæcology can discuss curettage fairly fully in less than 110 pages.

The author in his excellent account of the anatomy of the pelvic floor and genitalia describes the levator ani muscle as arising from the white line, and the fourchette as often formed by the posterior extremities of the labia majora. We believe that in neither of these descriptions is he correct, and he is certainly in disagreement with the majority of good

anatomists. The various operations which can be performed upon the pelvic floor are described well and in great detail, and the illustrations, of which there are a very large number, are extremely good. The account given of the action of the various portions of the pelvic floor is also good. The author strongly condemns the operation of ventrofixation in patients likely to become pregnant, and maintains that it is almost a surgical axiom that this operation should never be performed upon a patient in such conditions. We are of opinion that the manner in which the operation is performed is an important factor in these cases, but the contention of the author is a sound one. Dr. Stewart McKay's methods do not err for want of thoroughness; thus we note that in cases of well-marked prolapse he curettes the uterus, amputates the cervix, performs an anterior and posterior colporrhaphy, removes piles, and finishes the operation by performing ventrofixation. Certainly any surgeon who desires information on the various methods of treating displacements of the uterus by operation might do worse than read this book, and although in our opinion the article on curettage is of inordinate length and quite out of relation to the importance of the operation, yet it certainly does contain a great deal of useful information and will prove helpful to anyone who can afford the time to read it. If we may judge from the last chapter—on dysmenorrhœa—which appears to be interpolated for the purpose of describing Dudley's operation of incising the posterior lip of the cervix, the author in young women who suffer from dysmenorrhœa performs Alexander's operation when "between the times of the periods they suffer from constant backache." We cannot imagine a more unnecessary procedure or a statement more likely to do harm when read by anyone not able to appreciate such treatment at its correct value.

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*History of Medicine.* By Dr. MAX NEUBURGER. Translated by ERNEST PLAYFAIR, M.B. Lond., M.R.C.P. Lond. In two volumes. Vol. I. London: Henry Frowde and Hodder and Stoughton. 1910. Pp. 404.

THE volume of the translation of Dr. Neuburger's "History of Medicine" now before us includes Vol. I. and Part 1 of Vol. II. of the original German edition. Part 2 is in course of publication and will form Vol. II. of the English translation. We have already reviewed the book in its German form[1] and can only express our pleasure that such an excellent work should have been made accessible to readers who have no knowledge of German.

A good history of medicine in English has for long been a desideratum. Freind's work is, of course, a classic, but much both in ancient and modern medicine has been discovered since his day, and Dr. Withington's book, admirable though it is, of necessity treats the subjects in a superficial manner, owing to its small size. All the same, it is of great value to the student of medical history as a bibliography and record of authorities who may be consulted for further information. Dr. Neuburger's work being planned on a larger scale than that of Dr. Withington, has enabled its learned author to treat the subject matter more at length. His style is simple and easy, and Dr. Playfair has succeeded in producing an eminently readable translation. The volume before us contains the history of medicine from the earliest (Neolithic) times down to the thirteenth century, while the influence of Arab medicine on Western Europe is reserved for the next volume. And no one who reads the first volume will fail to look forward with interest and expectation to the appearance of the second.

[1] THE LANCET, June 8th, 1907, p. 1575, and June 25th, 1910.

## LIBRARY TABLE.

*The Prevention and Treatment of Abortion.* By FREDERICK J. TAUSSIG, A.B., M.D., Lecturer in Gynæcology, Medical Department, Washington University. With 59 illustrations. London: George Keener and Co. 1910. Pp. 180. Price 9*s.* net.—The treatment of cases of abortion is undoubtedly a very important part of the work of a medical practitioner. Whether the subject is so important as to merit a book being devoted to it alone is a matter of opinion, but apparently Dr. Taussig considers that it is. He certainly makes out a very strong case for his contention when he tells us that he finds the ratio of abortions to confinements among 600 gynæcological patients as high as 1 to 2·3, a proportion a good deal higher than that usually given by most authors, namely, 1 to 5. Criminal abortions, he states, are also very frequent; thus he found them in no less than 10 per cent. of his own cases, while Treub finds 52 in 218 abortions, or a percentage of 25. Not only are abortions relatively commoner than we usually imagine, but the death-rate is also high, at any rate when septic infection is present. Dr. Taussig quotes Sittnev as recording among 267 uncomplicated cases one death only, but no less than three deaths among 35 septic cases. Maygrier's figures are even more striking, for while the mortality of his spontaneous abortions was 0·57 per cent., that of his criminal abortions was no less than 56·8 per cent.; and it must be remembered that these figures take no account of the excessive morbidity rate attending such cases. The large part which criminal abortion must play in the production of gynæcological affections is shown by the figures quoted by the author, showing that 80,000 criminal abortions occur every year in New York and from 6000 to 10,000 a year in Chicago. There does not seem much hope that this crime will diminish in frequency; rather is there evidence to show that it is becoming more and more prevalent in all the cities of the world. The author trusts that education and legislation may have some effect in diminishing the practice; but although severe penalties are enforced by the laws of nearly all countries, only too often they are a dead letter, and the difficulties of obtaining a conviction in these cases are notorious. We notice in the treatment of cases of retroflexion and pregnancy that the author favours the introduction into the vagina of a colpeurynter filled with mercury. For our part we prefer the method of exerting pressure upon the uterus, a very efficient method, by means of a rubber ring of large size. The treatment of abortion as laid down by Dr. Taussig is eminently sound. He rightly deprecates undue interference in cases of uncomplicated abortions and summarises the operative indications thus: "In the absence of immediate danger await developments, and operate only when complications arise." In describing the method of evacuating the uterus in cases of incomplete abortion the author does not lay enough stress upon the importance, indeed the absolute necessity, for getting the uterus anteflexed and held by the left hand against the back of the symphysis pubis before any attempt is made to introduce the finger into its interior. In this way alone is it possible to carry out properly his advice to push the uterus down on to the finger and not to attempt to push the finger into the uterus. Indeed, except in very early cases of pregnancy unless this manœuvre is carried out there will be the greatest possible difficulty in reaching the fundus uteri. With the principles of treatment as recommended by Dr. Taussig we are in complete agreement, and this monograph he has written is a very good one and will repay perusal even by the specialist.

*Hints for the General Practitioner in Rhinology and Laryngology.* By Dr. JOHANN FEIN, Privat-docent in the University of Vienna. Translated by J. BOWRING HORGAN. London:

Rebman, Limited. 1910. Pp. 223. Price 5*s.* net.—As an easy mode of access to the subjects with which it deals, this book leaves little to be desired. It is written in a pleasant and readable manner, for which the translator deserves some of the credit, and it exercises little or no strain upon our powers of comprehension. It might be said, indeed, with some truth, that Dr. Fein places the general practitioner's attainments at too low a level, as, for instance, when he includes "ozæna" among "diseases of the nose the recognition and treatment of which is [*sic*] only possible for one who has had some special training." With regard to the suitability of the book as a guide to British practitioners its value is impaired by its having been written for a foreign people whose customs are different from ours. We should not at all satisfy the public in our country, for example, if we were to operate on tonsils and adenoids without an anæsthetic. Dr. Fein's teaching in general runs along familiar lines, but he is singular in recommending that after turbinotomy "the nose should remain plugged for from one to four days." This is advice which, we are sure, nearly all modern rhinologists would deprecate.

*Science and Singing.* By ERNEST G. WHITE. London: The Vincent Musical Co., Limited. 1909. Pp. 72. Price 4*s.* 6*d.* net, or $1.25 net.—The author of this brochure has discovered that tone is produced in the nasal accessory sinuses, the higher notes in the frontal sinuses, the middle in the ethmoidal cells, and the deeper in the sphenoidal sinuses. The function of the vocal cords is merely to direct the current of air, like water from a hose-pipe, into these various chambers, from which it sweeps out the mucus like a broom in a spring-cleaning. (The metaphors are the author's.) He has also discovered, and a photograph of a dry skull is reproduced to prove it, that the bony palate is filled with "hundreds of air-cells." Armed with his theory, the author marches forth conquering and to conquer—deaf-mutism among other things; "such an individual as a deaf-and-dumb person will not be known throughout the length and breadth of the civilised world." Curiously enough, it has had a different effect upon us. It has rendered us speechless.

INTERNATIONAL HYGIENIC EXHIBITION, BUENOS AIRES, 1910.—A grand prize has been conferred upon Messrs. Burroughs, Wellcome and Co. for their exhibit at the International Hygienic Exhibition now being held in Buenos Aires.

THE GUILD OF BRAVE POOR THINGS.—Princess Louise, Duchess of Argyll, has sent us a letter of appeal on behalf of the Heritage School of Arts and Crafts for Crippled Boys at Chailey, Sussex, which is in connexion with the Guild of Brave Poor Things. The object of this school is to inspire the children with courage to fight against their handicap in the battle of life and to equip them to support themselves by a thorough training in suitable crafts. Hitherto the work has been carried on in a temporary building, but now, when the full value of the teaching given to the children has been recognised by the Board of Education and the school is full to overflowing, with a long waiting list, it has become absolutely necessary to make the buildings suitable for modern requirements. The necessary alterations and extensions will cost about £5000, and towards this sum a few friends have promised or guaranteed £2500 conditionally on a sufficient sum being raised. Princess Louise feels sure that the crisis has only to be made known to bring forward other helpers. The girls' school is a new building the gift of Lord Llangattock. It is of melancholy interest to note that it is proposed to name the new gymnasium for the school after the late Hon C. S. Rolls, who took a keen interest in this branch of the Guild's work, and on account of whose lamentable death at Bournemouth the speech day of the school which was to have been held on July 23rd was cancelled. The president of these schools is the Bishop of London, and the honorary treasurers Lord Llangattock and Miss Alice Rennie, 36, Westbourne-terrace, Hyde Park, W., who will be happy to receive contributions.

# Reports and Analytical Records
FROM
# THE LANCET LABORATORY.

## "TABLOID" BISMUTH GAUZE.

(BURROUGHS, WELLCOME, AND CO., SNOW HILL BUILDINGS, LONDON, E.C.)

THIS is a new antiseptic dressing which will be appreciated for several reasons. The antiseptic is a bland bismuth compound which is non-toxic and without odour. The gauze readily responds to the test for bismuth. The gauze can be used in all cases in which iodoform gauze is employed, but it has the demonstrable advantage that when used as an absorbent dressing in the uterine cavity it remains odourless for five days, while in the same situation iodoform gauze becomes offensive in 48 hours. It clearly offers a powerful yet non-irritating antiseptic surface which will be found convenient and effective in gynæcological practice. The gauze is made in widths of 1, 2, and 3 inches, and is carefully sterilised and packed in one-yard rolls which are surrounded by a specially varnished germ-proof cover.

## PRESERVED MANGO JUICE.

(THE ORIENTAL CANNERY CO., HONAVAR, INDIA.)

We found that the process of preservation of this juice is free from objection; there were no undesirable preservatives present, the pulp was in good condition and sound, while the inside of the tin was bright and clean. The juice had the peculiar taste of the fresh mango, a fruit which is much esteemed in India and in America. The mango tree is peculiarly sensitive to frost, and therefore its cultivation is confined to warm countries. Some authorities regard the mango as of medicinal value, and there is no doubt it serves as a mild laxative. On analysis of the mango juice we obtained the following results: Moisture, 81·35 per cent.; mineral matter, 0·57 per cent.; albuminous matters, 0·88 per cent.; malic acid, 0·20 per cent.; sugar, trace only; alcoholic extract (chiefly glycerine), 17·0 per cent. The mango possesses, it is interesting to note, anti-scorbutic properties which may be referred to the important quantity of alkaline salts present. The fruit may be consumed without harm by gouty and diabetic patients, since it is practically free from sugar, while the amount of free acid present may be disregarded.

## HUXLEY'S PROTEID FOOD.

(THE ANGLO-AMERICAN PHARMACEUTICAL CO., GALEN WORKS, 59, DINGWALL-ROAD, CROYDON.)

We have received two forms of this food, one in which egg is used and one prepared without that addition. Our analyses practically confirm those already published. Food A (prepared without egg) gave the following results: Moisture, 15·70 per cent.; mineral matter, 8·30 per cent.; protein, 47·62 per cent.; fat, 1·0 per cent.; carbohydrate (chiefly cane sugar), 27·38 per cent. The preparation with egg (Food B) gave the following results: Moisture, 11·50 per cent.; mineral matter, 8·50 per cent.; protein, 48·86 per cent.; fat, 6·50 per cent.; carbohydrates (chiefly cane sugar), 24·64 per cent. There were present also sodium glycerophosphates and calcium formate. Finally, both foods are said to contain active lactic ferments, and in experiments upon milk we found this statement justified. Incubation over a period of 24 hours produced a steady increase of lactic acid and a curdling of the milk protein. It is claimed, further, that sodium glycerophosphate is present in a potential form—that is, it becomes available for the promotion of nutrition at the time of ingestion. The foods are of distinct merit and their composition has evidently been carefully worked

out, having regard to special physiological requirements. They are prepared chiefly for the use of sufferers from digestive disorders and those with feeble powers of assimilation.

### BOULOU NATURAL MINERAL WATER.

(ST. LEGER, 24, ELSHAM-ROAD, KENSINGTON, W.)

The source of this interesting water is in the Pyrenees and its chief characteristic is the presence of an important amount of alkaline salts, sodium bicarbonate predominating. Further, it effervesces distinctly with carbonic acid gas, but does not contain an excess. The water is peculiarly soft to the palate and leaves an impression of cleanliness in the mouth. From its chemical composition it is clearly entitled to rank among those which are well known to be useful in catarrhs. It is particularly of service, for example, when taken freely and systematically in gastric catarrh and in certain intestinal disorders. It has a marked diuretic action. Our analysis showed that the water contained per litre 3·97 grammes of sodium carbonate, 0·91 gramme of sodium chloride, 0·97 gramme of calcium carbonate, 0·19 gramme of magnesium carbonate, and 0·10 gramme of silicic acid. There were present also salts of other metals, as, for example, manganese, iron, strontium, and potassium, but occurring only in minute quantities.

### SOPHOL.

(THE BAYER CO., LIMITED, 19, ST. DUNSTAN'S-HILL, LONDON, E.C.)

Sophol is an interesting organic combination (formonuclein) of silver containing 20 per cent. of the metal. It is a dull-brown powder readily soluble in water. The compound is evidently a stable one, since the ordinary reagents of silver give no results when added to its solution. Sodium sulphide, however, readily separates the metal in the form of black sulphide. Sophol is introduced for use in ophthalmological practice, its merit, compared with other preparations, being that it is non-irritating, while it is an effectual destroyer of the gonococcus. According to experiments made with sophol, it appears to be a decided advance on silver preparations which have, so far, been employed in diseases of the eye.

### VIBRONA.

(FLETCHER, FLETCHER, AND CO., HOLLOWAY, LONDON, N.)

The completion of new laboratories on modern hygienic principles for the purpose of preparing this wine on scientific lines is evidence of the manufacturers' determination to produce a standard article. When regard is had to the composition of a good genuine wine it is clear that on the face of it the constituents of cinchona bark must be practically incompatible with it. Perhaps tannin presents the greatest difficulty, since tannin precipitates most alkaloids. By the careful and ingenious processes adopted at the Vibrona laboratories a wine is produced which contains a definite and standard amount of cinchona bark principles in a thoroughly soluble and stable condition. The wine is quite bright and without deposit even after keeping for some time. One of the secrets of producing a permanently clear and bright product is the exposure of the preparation to a low temperature before bottling. Another important point is that the cinchona principles are present as hydrobromates, which are said not to produce the "cinchonism," which occurs in some patients when they take the ordinary cinchona preparations. We have examined a sample of Vibrona wine taken direct from the factory, and a sample purchased independently on the open market, and the results definitely support the claim that the wine is a carefully standardised preparation. In the one case, for example, we found a total alkaloidal content of 0·024 gramme per 100 cubic centimetres of the wine, while in the other the amount found was 0·026. This corresponds practically to the presence of cinchona bark constituents equal to five grains of the bark in two fluid ounces of the wine. While these results agree in regard to the active constituents present, there were unimportant variations in the amounts of alcohol, extractives, and mineral matters present in the two samples. Under medical direction the wine may serve an obviously useful purpose.

### LIN AULAGNE.

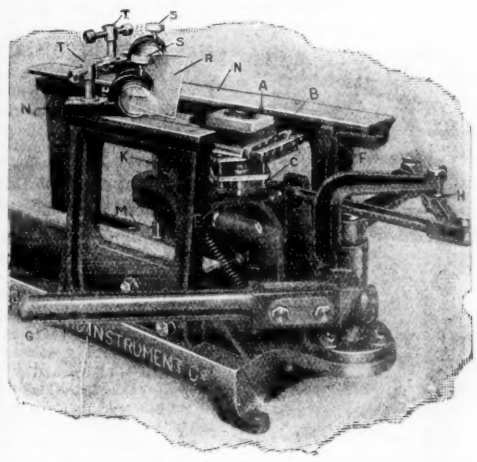
(E. AULAGNE, PARIS. AGENCY, ERNEST A. WHITE, 40, STANHOPE GARDENS, ILFORD, E.)

This linseed-meal poultice is most valuable and convenient in practice. It is very ingeniously constructed, and consists, it is stated, of specially prepared linseed (rendered antiseptic by boric acid), which is finely powdered over several layers of gauze, which are then compressed, sewn together, and made up in rolls from which a piece of any required size and shape can be easily cut off. On dipping the poultice in boiling water for a few minutes the meal absorbs a remarkable amount of water, the whole fabric becoming light and soft. An impermeable tissue is provided for covering the poultice during its application. We learn that the poultice answers admirably for suppurating wounds, whilst it can be readily employed as a mustard cataplasm by sprinkling a little dried mustard over the linseed. We regard the little appliance as an excellent help when a fomentation is needed.

## New Inventions.

### A LARGE SLIDING MICROTOME.

OUR attention has been drawn to a microtome that has been recently introduced by the Cambridge Scientific Instrument Company which presents some novel features that are worth notice. The instrument has been specially designed to cut sections of unusually large objects, the full size of a paraffin or celloidin block with which it is capable of dealing being 150 × 120 mm. (6 × 4¾ inches). It is built on extremely rigid lines; the two sides (N and $N_1$) support a large knife (R) which can be firmly held at each end in such




a way that it forms any required angle with the edge of the object to be cut; a new feature is an arrangement by means of which the surface of the knife can be tilted through a measured angle and adjusted to that which experiment has shown to be the one most suitable for the class of material it is desired to cut; for example, paraffin may require a different angle from celloidin, and decalcified bone from

muscle or soft tissues. The block (A) containing the object to be cut is easily fixed to the object-holder, which can be adjusted to any position and is supported on a heavy carriage made to slide backwards and forwards by the movement of the lever (G). The guides of the carriage travel in two oiled channels, and it is claimed that all wear is automatically compensated for. The object-holder is fed upwards after each stroke of the lever by means of a ratchet and toothed wheel, while tearing of the material on its return journey past the blade of the knife is impossible owing to the fact that the surface remains low until its return is completed. The different parts of the machine are indicated by letters in the illustration but need not be pointed out in detail. The thickness of the sections can be varied from 0 to 0·06 mm. by adjusting an arm to a scale provided, each division on the scale corresponding to 0·002 mm. The object can be fed through a distance of 21 mm.

In practice the instrument has been found to work satisfactorily and to give no trouble; it is certainly necessary that great care should be exercised in embedding very large preparations, and attention should be given to such details as that of fixing the wood-block with absolute rigidity and of arranging the knife at the angle which is best for the particular material which is to be cut. No difficulty will be found in sharpening the knife on a good hone.

We have been especially impressed with the rigidity of the instrument and the thorough way in which the details of the construction have been carried out. The new features that have been embodied appear to fulfil most satisfactorily the purposes for which they have been designed. The possibility of being able to prepare microscopic sections measuring three or four inches in diameter, is one that will be readily appreciated both by those engaged in research, and perhaps even more by those whose business it is to teach normal and pathological anatomy, for, mounted as lantern slides, these sections project exceedingly well, and the advantage of being able to show what is practically a low power picture of a section on a screen in full view of any number of students will be easily understood. We understand that excellent contact photographic prints have also been obtained from sections cut by this instrument.

We have no hesitation in saying that its use will have wide applications in the future; its purchase should prove an economical investment, inasmuch as it is equally efficient for every class of work, and has all the appearances of being able to stand unlimited hard wear.

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## NASAL PUNCH FORCEPS.

I HAVE designed the forceps illustrated in the figure more especially for the removal of the anterior ends of the inferior and middle turbinated bones. They are made somewhat on the design of Luc's forceps, but the blades are made to punch or cut a piece cleanly out, and the peculiar jointing of the forceps ensures the accurate approximation of the cutting surfaces. I have used them in a number of cases and find them highly satisfactory, and they will also be found useful for the removal of septum and crest in submucous resection, and they form an efficient punch for removing portions of the tonsil. They are manufactured by Mayer and Meltzer, 71, Great Portland-street, London.

GEORGE W. BADGEROW, F.R.C.S.,
Senior Assistant Surgeon, The Throat Hospital, Golden-square, W.

## CONVENTION OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

THE Twentieth Annual Convention of this association was held at Saratoga Springs, New York, on Sept. 13th, 14th, and 15th.

The President (Dr. Thomas D. Crothers, Hartford, Conn.) delivered an address on the Physics of Light Therapy.

The following reports of Standing Committees were presented: Dr. G. Betton Massey: On Direct Continuous Current, including Electrolysis, Electro-Chemical Surgery, Ionization, and all apparatus connected therewith. Dr. Frederick de Kraft: On Induced Currents, and apparatus. Dr. T. Harris Cannon: On Static Currents, and apparatus. Dr. S. M. McCollin: On Phototherapy, Radiotherapy, and apparatus. Dr. Fred H. Morse: On Mechanical Vibration Therapy, Exercise Therapy, and apparatus. Dr. Francis H. Munroe: On Hydrotherapy, Thermotherapy, and apparatus. Dr. Byron S. Price: On Dietetics. Dr. Thomas D. Crothers: On Research. Dr. W. Benham Snow: On Standard Therapeutic Measures.

The following papers were read:—Dr. Margaret A. Cleaves (New York): The American Electro-therapeutic Association; the Relation of its Work to Cellular Changes; a Retrospective *Résumé*. Dr. J. W. Torbett (Marlin, Texas): Report of X Ray Treatment of Spleno-Myelogenous and Lymphatic Leukæmia, with Blood Findings of Each. Dr. G. W. Strobell (Ruthland, Vt.): Report of a Case of Splenic Leukæmia Successfully Treated by Modern Methods. Dr. Louise G. Robinovitch (New York): Electric Anæsthesia in Human Surgery; Electric Sleep by Wireless and Unipolar Currents; Displacement Currents. Dr. Herbert McIntosh (Boston, Mass.): Psoriasis. Dr. J. D. Gibson (Denver, Col.): Some Blood Studies in Roentgen Therapy. Dr. William Benham Snow (New York): The Treatment of Inflammation. Dr. Frederick de Kraft (New York): Electricity in the Treatment of Gout. Dr. A. W. Baer (Chicago, Ill.): Treatment in Infantile Paralysis. Dr. Anthony Bassler (New York): Some Laboratory Findings in Diseases of Metabolism, which Question that these are Only of Metabolic Origin; the Rôle of Chronic Intestinal Disorders in the Production of Some of Them. Dr. Herbert F. Pitcher (New York): The Etiology and Treatment of Eczema. Dr. Frank E. Peckham (Providence, R.I.): Osteo-arthritis of the Spine. Dr. F. Howard Humphris (London, England): Lumbago. Dr. G. Betton Massey (Philadelphia, Pa.): The Treatment of Chronic Metritis with Decensus or Displacement. Dr. J. H. Kellogg (Battle Creek, Mich.): Light Baths. Dr. Samuel J. Harris (Boston, Mass.): Treatment of Cataract by Electricity. Dr. William J. Clark (Philadelphia, Pa.): Oscillatory Desiccation in the Treatment of Accessible Malignant Growths and Minor Surgical Conditions: a New Process. Dr. Fred. H. Morse (Boston, Mass.): Reaction Effects of Physical Treatments. Dr. Gustavus Werber (Washington, D.C.): Enforced Compensation. Dr. G. Betton Massey (Philadelphia, Pa.): Remarks on the Electrical Treatment of Interstitial and Hæmorrhagic Fibroids of the Uterus. Dr. J. Willard Travell (New York): A Noteworthy Case of Sciatica. Dr. W. H. Mick (Omaha, Neb.): Untoward Action of the X Ray and its Treatment. Dr. Frederick C. Tice (Roanoke, Va.): The X Ray and Light in the Treatment of Infection. Dr. Arthur W. Yale (Philadelphia, Pa.): Modern Malpractice in Gynæcology.

There was an interesting exhibition of electrical appliances for use in medicine and surgery, including two or three new electrodes for the purpose of administering fulguration, X ray tubes designed to withstand heavy currents, and a new form of static machine (a Baker modification of the Toepler-Holtz) which was capable of passing 7 or 8 milliampères through an X ray tube of medium hardness.

Dr. F. Howard Humphris (London) was elected a vice-president of the association.

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ROYAL UNITED HOSPITAL, BATH.—Mrs. C. Baker of Bathampton has given £500 to the funds of the Royal United Hospital to endow a cot in the children's ward in memory of her late husband.

# THE LANCET.

*LONDON: SATURDAY, OCTOBER 15, 1910.*


## Medicine and the Church.[1]

SYMPOSIA upon disputed subjects are a literary device well known from classical times downwards by which conveniently to weld various opinions into a more or less harmonious whole; and the papers which are collectively issued under the title "Medicine and the Church" form an admirable epitome of the opinion held by leading clerics and physicians, together with some laymen, upon a matter which has of late years assumed a revived importance. Twelve writers have contributed towards the book in addition to the editor, who supplies an introduction, and the Bishop of WINCHESTER, who has contributed a "foreword." Among them are the Bishop of BLOEMFONTEIN, Sir CLIFFORD ALLBUTT, the Rev. Dr. ROBINSON, Prebendary FAUSSET, Dr. T. B. HYSLOP, Dr. JANE WALKER, Mr. STEPHEN PAGET, and the Hon. SYDNEY HOLLAND, all names which constitute a guarantee of sound thinking, and as a result we have a work of real and practical utility.

The question debated in the book is one which is as old as medicine itself, or, to be more exact, which supplied its own answer in the dawn of our profession. For at that day the priest and the medicine-man were one, as they are still among the few primitive peoples who are left on the globe, and whose ethics are known to us with any certainty. But as time went on, not only did the office and calling of the priest become divorced from that of the medical man, but, to speak generally, the first looked upon the discoveries of science with unbelief or positive antagonism, while the second in his turn took up an attitude of indifference or of enmity towards anything to which he could not apply the tests of reason. For many centuries, too, the science of medicine was upon a very low level, and no proper distinction was made between that class of disease which for want of a better name is called functional and that in which there is really some organic change. Hence arose cures—cures which appeared to be against the course of nature and were miscalled miraculous by those who forgot that great saying of ST. AUGUSTINE, quoted by Prebendary FAUSSET, "Portentum fit non contra naturam, sed contra quam est nota natura." After the Reformation the Church of England seemed, except in her formularies, to forget that her children had bodies as well as souls, while in the Roman Church the office of Unction of the Sick became transmuted into the unction of those who are leaving this life for the next. Nor was the profession of medicine blameless, for there was a tendency to treat the disease rather than the patient, and to consider as matters of no moment affections which, although they did not owe their origin to any gross disturbance of tissue, were nevertheless of very real moment to the patient. In cases of this sort the quack spiritual healer finds his widest opportunity, and owing to his vagaries the true usefulness of "mental healing" has been obscured. It is to throw light upon this obscurity, and to consider the field of function which belongs to both medical man and priest in their dealing with the sick, that the papers in the book before us have been written. All of them are good and worthy of careful consideration both by medical men and the clergy. If we give special mention to those by Dr. H. W. G. MACKENZIE, Dr. T. B. HYSLOP, Dr. JANE WALKER, the second paper by Prebendary FAUSSET, and the contributions of the Bishop of BLOEMFONTEIN and Dr. ROBINSON, we none the less would not have missed willingly the two short contributions from Mr. STEPHEN PAGET and Mr. SYDNEY HOLLAND respectively, or the admirable little essay by Mr. ELLIS ROBERTS entitled "The Church and Mental Healing," which from the point of view of an educated man, who is presumably neither medical man nor cleric, sums up some difficult points in a very clear manner. Taken as a whole, the various papers set out an opinion much the same as that of the Lambeth Report of the Committee upon "Ministries of Healing"—namely, that there is room for both priest and physician in the sick room, and our own opinion tallies with this. There is no medical man who will deny the power of the mind over the body, no one who will not agree that if a patient desires to, and thinks that he will, get well, he is, *ceteris paribus*, in a much better position for recovery. Prayer, as both Dr. JANE WALKER and Dr. HYSLOP point out, whether as a personal habit or as offered for the sick by another, is of great value in securing mental stability and that quiet mind for which the Prayer Book contains a petition. A tactful and experienced priest may often be of the greatest assistance to a medical man, and no practitioner would, if his patient desired to see such an one, forbid his entry to the sick room. For the medical man knows that the ministrations of the wise priest constitute a very different affair from the folly or irreverence of "Christian Science."

The medical profession cannot be expected to take seriously the healings reported to the credit of Mr. JAMES M. HICKSON of the Society of Emmanuel; and to responsible clergymen who, seduced by the desire to preserve an open mind, may too easily credit such performances we would commend that warning of JEREMIAH, "I have not sent these prophets, yet they ran." The Office for the Visitation of the Sick, imperfect though it be and as the Lambeth Committee considered it to be, together with prayer by the sufferer himself, by his friends, and above all by the collective body of the Church in public worship, are far more efficacious than any ministrations by self-styled "spiritual healers." To quote the Bishop of LONDON, "If I was ill, I would send for the best doctor, and get my parish priest to come and pray by my side, believing that the double work of JESUS CHRIST is shared by two great professions. It would be bad for either to be banished from the sick room." The spirit of that sentence is, on the whole, the spirit of the collected papers contained in "Medicine and the Church," and, in our opinion, it is commendable.

[1] Medicine and the Church: A Series of Studies on the Relationship between the Practice of Medicine and the Church's Ministry to the Sick. Edited by Geoffrey Rhodes. London: Kegan Paul, Trench, Trubner, and Co., Limited. 1910. Pp. 298. Price 6s. net.

## Operations and Mortality.

FROM time to time the suggestion is put forward that sufficient care is not taken by surgeons in the selection of cases chosen for operation, and many of our lay critics go further and allege that in the performance of operations there is often an absence of a due sense of responsibility. To ensure that greater care shall be exercised in these matters it has been urged on more than one occasion that an inquiry—an inquest, in fact—should be held on all patients who die after an operation, a situation which was discussed in THE LANCET[1] last week from its medico-legal aspect. The latest enunciation of these ideas is contained in an article in the current number of the *Socialist Review*, where an attack is made on the motives prompting the performance of many operations, on the selection of the cases, and on the modes of operation often adopted. The article in the *Socialist Review* suggests that as an inquiry has to be held when a fatal accident occurs in a mine in order to find out if due precautions have been taken to prevent its occurrence, or if the incompetence or negligence of anyone connected with the mine is responsible for the result, so a similar inquiry should be held whenever an operation is followed by a fatal result. The first categorical accusation against operating surgeons made in support of this proposition is that surgeons do not use adequate thought in diagnosing the case before proceeding to operation, and that consultation with their colleagues is rare as a preliminary measure. In our experience the pains taken with regard to diagnosis are as a whole very great, while certainly an appeal to other members of the staff is the usual custom in most hospitals as well as in private practice. In cases of any doubt a consultation is practically always held, so that the main ground for this attack is cut away.

For these accusations form an attack, and the attack continues with the pronouncement that even if the diagnosis is correct an operation is often performed unnecessarily. If appendicitis, for instance, is present, need an operation always be performed? We are told that the operating surgeon says "Yes," while every medical practitioner knows that many cases of appendicitis recover without operation, that recurrence of the affection occurs only in a small minority of the cases, and that the mortality of the operation is appalling. We find it stated that while some surgeons give a mortality as low as 3 per cent., others give anything up to 20 or 25; but the writer of the article informs us "that every practitioner knows that some surgeons have a mortality of 100 per cent." Such statements exhibit the harm which results from a little knowledge, for we are more inclined to believe the writer ignorant of the subject than that he wilfully misstates the case. It is not possible with any utility to make any general statement as to the mortality of operations for appendicitis. During the interval between two attacks an operation will give a mortality of under 1 per cent. in the hands of all those who have had a real surgical training. On the other hand, when an appendicitic abscess has burst into the general peritoneal cavity, and has set up peritonitis unlimited by the formation of any adhesions, and especially when many hours have elapsed between the perforation and the operation, the death-rate must be indeed high. Without operation death is certain; with an operation suitable for that state and condition of the patient some cases will recover. We do not believe that the practice of any surgeon will show a mortality of 100 per cent. in operations for appendicitis, as the writer asserts. Further, he maintains that a high mortality indicates a lack of judgment in diagnosis or incompetence in the execution of the operation, and he makes this statement without the least regard to the stage or severity of the disease. Somewhat similar statements are made with regard to operations for brain tumours, from which, we are told, not one in a hundred recovers. The purpose of the paper is stated to be the expression of the belief of the need for measures to be taken by the State to ensure that only justifiable and legitimate operations should be performed. The remedy suggested is that the State shall compel all hospitals, public, private, and cottage, to be registered, and to publish a percentage of recoveries for each disease and operation. The names of the physicians are to be given; in the case of a surgical operation followed by death the operating surgeon, whether in hospital or private practice, is to notify the coroner and an inquiry will forthwith be held. We have quoted sufficient from this paper to show the animus of the writer, who prefers to remain anonymous, sheltering himself behind letters representing academic distinctions. We do not admit the accuracy of the statements made by him. His statistics are worthless and the conclusions based on them are naturally untrustworthy, while his ignorance of the factors upon which mortality depends betrays him into crude fallacy.

None but the ignorant would venture to deny the value of modern surgery. As Professor WILLIAM THORBURN in his introductory address at the University of Manchester pointed out last week in our columns, the progress of surgery has resulted in an immense saving of life, limb, and suffering. Within the last 25 years at the Manchester Infirmary the death-rate from all causes after operation has fallen from 10·5 to 8·5 per cent., in spite of the fact that now nearly three-fourths of the patients in the surgical ward are operated on as against one-fourth 25 years ago. While in 1883 20 per cent. of the deaths after operation were due to infective conditions, now only 1 per cent. is due to such causes. There is a natural conservatism in many members of the medical profession, and the resistance to progress which manifests itself in opposing many suggested alterations in practice is by no means small. We would not for a moment imply that every modification of surgical treatment is necessarily an advance, indeed we wrote to the contrary effect quite recently. Yet there will always be found too many ready to cry out that a new procedure is unnecessary or even harmful. When anæsthesia was first introduced there were not a few who urged that anæsthesia was unnecessary for operations, as will be seen by reference to the medical periodicals of the time. It is true that patients have died from anæsthetics since; it is true that patients in the future will die from anæsthetics, however carefully, however judiciously administered; but

[1] THE LANCET, Oct. 8th, 1910, p. 1099.

shall we therefore refuse to avail ourselves of these valuable agents in operation? Let us think of the thousands, of the tens of thousands, who have benefited by this great step in advance in surgery. We regret the deaths; we would modify our procedure in any way which would avoid such a distressing occurrence as death from anæsthesia; and it may be that in the future some safer methods of anæsthesia may be produced. But meanwhile we cannot, we must not, refuse to avail ourselves of the use of anæsthetics during operations. There are ever those who are ready to cry unjustifiable when some new operation is proposed or performed. When ovariotomy was first introduced the unfavourable results led many members of the medical profession to consider that the operation was unjustifiable, and that any operator performing it deserved prosecution for manslaughter. But, in spite of this intense opposition, a few surgeons persisted. In Sir SPENCER WELLS'S first hundred cases there was a death-rate of 34 per cent. With each hundred the mortality diminished, and in his tenth hundred the death-rate was only 11. We may be sure that if any mechanism had existed in those early days of ovariotomy for bringing Sir SPENCER WELLS'S results before a coroner's inquest, in many of the cases a verdict would have been returned that he had performed an unjustifiable operation, and the result of such a verdict would have been the misery and death of thousands upon thousands of women. Ovariotomy has become a comparatively safe operation and the mortality of to-day is much less than it was 30 years ago. In the words of Sir JOHN ERICHSEN, "The procedure, formerly so fatal as to be pronounced unjustifiable, is now the most successful of all great surgical operations."

Much progress has been made, and many operations which were inconceivable a few decades ago are now widely and successfully performed. Nothing would tend to stem the onward progress of surgery so much as to make a surgeon liable to have his work tried before a coroner's jury, for that is what it amounts to. Inquiry would be made as to whether the operation were justifiable; as to whether it were performed with skill and care; and evidence would be taken on these points. The only persons present at the majority of operations, in addition to the surgeons, are the house surgeon, the dressers, and the nurses. Shall these be called upon to accuse or to justify the actions of the surgeon? We can imagine a certain sort of nurse, not necessarily the best sort, giving evidence as to the suitability or the capability of the surgeon, and we have little doubt that the jury would be more inclined to accept her evidence and opinion than those of the surgeon himself. Even a surgeon of equal competence to the operator himself, and present at an operation, is not always capable of judging of the difficulties encountered so well as the surgeon who does the operation. Then we cannot imagine a tribunal less fitted for deciding questions as to the desirability of an operation or the capability of a surgeon than a coroner's jury. The possibility of having to appear for trial before such a body would doubtless deter many surgeons from performing operations where the risk to life was great. And yet every experienced surgeon can tell of numerous lives saved by a timely operation in which the prospect of success was not great. If the patient and his friends know the risk of the operation and the chance of life if no operation be performed, and if they agree to the performance of the operation and the surgeon is willing to do it, who shall say them or him nay? The very life blood of true progress in surgery is the devising and the carrying-out of new operations or the employing methods unknown before; but what would be the result if the performance of a new operation or the use of a hitherto unknown method might subject the surgeon to the ordeal of a public trial? Few men would take the risk of unmerited public obloquy; and many, many patients would perish miserably.

## A Historical Martyr.

CIRCUMSTANCES have made the death of MIGUEL BOMBARDA, our respected colleague, into a historical event of the first importance. One of ARISTOTLE'S many political inductions, repeated by subsequent thinkers, as, for instance, by HERODIAN in his sequel to SUETONIUS, that revolutions are often brought about by causes apparently accidental, nay, relatively trivial, has its latest illustration in the sudden change of government in Portugal. True, as ARISTOTLE himself and the chroniclers of Rome's decline and fall knew all too well, the causes in question would have had no effect but for predisposing circumstances which only awaited opportunity to find their inevitable issue. Still, the interesting fact remains that the assassination of a medical man, beloved as a citizen and in great request as a consulting alienist, was the occasion that gave direction and power to a vigorous and perhaps far-reaching explosion, not unexpected, but certainly startling, by which the world awoke at the end of last week to find the Portuguese monarch a fugitive and a Republican government established over the capital city of Lisbon. Dr. BOMBARDA was, by the most authentic account, professionally engaged in his consulting-room when a former patient, a lieutenant in a regiment of the line, who had with a certain measure of success been treated for cerebral derangement, called to report himself. In the course of the interview, in a sudden access of his ailment, he discharged three shots from a loaded revolver at the unfortunate BOMBARDA. One of these had taken deadly effect in the abdomen, but the victim, summoning up his fast-ebbing strength, overpowered his assailant just as his servants rushed into the room in time to hear his dying words: "Don't harm him. He is mad."

The incident is one of the most pathetic in the annals of the medical profession, as surely its sequel was one of the most dramatic. No sooner was the assassination known than the popular indignation, all too apt to "see its own in another's wrong," became possessed with the conviction that the crime was brought about by official instigation, or, at least with official cognisance, opponent as BOMBARDA was of the party in power, nay, representative in the recently elected Parliament of the Republican interest. Not even the authentic words that absolved the wretched assailant from premeditated crime could avail for a moment to stem the rising tide of resentment and revolt. The deed was loudly proclaimed as quite in keeping with the policy and procedure of the Royalist party, and the Liberals were

prompt to describe the incident as but the latest in a series of oppressive and despotic acts. Such was the instantaneous impression and comment of the piazza, and in this way the psychological moment arrived for the revolutionary explosion, the subversion of the old order, and the planting of the new *régime* on its ruins. It is not for us to forecast the political consequences of this movement, or its effects, immediate or remote, on the country itself or on Europe in general. We have but to record our sense of loss at the untimely, the tragic, end of an able and accomplished representative of the healing art in a sister country, whose skill as an alienist and energy as an organiser were appreciated far beyond the city in which he taught and practised, and whose last words, we hope, will prove a bequest to his compatriots to temper justice with mercy, and to use their newly acquired power in the humanitarian spirit in which he lived and died.

# Annotations.

"Ne quid nimis."

## PHARMACEUTICAL EDUCATION.

IT is highly probable that before many years have gone by the system of pharmaceutical training and education at present in vogue will undergo a fundamental change. The Council of the Pharmaceutical Society recently obtained powers to require candidates for the statutory examination to undergo a defined course of study, and the question of devising an appropriate course is now under consideration. In the meantime there is no compulsory curriculum of study for pharmaceutical candidates, and it is no part of the duty of the Council or the Board of Examiners to inquire of candidates how or where they obtained their knowledge. Some years must necessarily elapse before the projected changes can be put into force, and the pamphlet entitled "How to Become a Pharmacist," edited by Mr. John Humphrey and published by the Pharmaceutical Press (price 1*s.*), provides those who desire to adopt pharmacy as a career with all the information about the necessary qualifications. The first step to be taken is to pass one of the preliminary examinations approved by the Pharmaceutical Society, such, for example, as the matriculation examination or the senior school examination of the University of London. Then follows an apprenticeship of three years, during which period the student should have ample opportunity to make practical acquaintance with the methods of manufacturing galenical preparations and to obtain experience in dispensing physicians' prescriptions; if he is fortunate, the student will also be able, during his apprenticeship, to attend classes at one of the numerous technical schools and so obtain elementary instruction in some of the subjects of the minor examination. When the apprenticeship is completed it is usual, and for the vast majority of students essential, to attend a course of lectures and laboratory instruction at a school of pharmacy. The Pharmaceutical Council recommends that such a course of instruction should occupy a period of not less than six months, and that such period of study should include 60 lectures in chemistry, 45 lectures and demonstrations in botany, and 25 lectures and demonstrations in materia medica. Judging from the high percentage of unsuccessful candidates at the qualifying examination, it seems evident that the council's advice is often neglected. The subjects of the examination are botany, chemistry and physics, practical chemistry, materia medica, pharmacy, practical pharmacy, and dispensing and prescription reading. The examination is of a searching character, and all who pass it should be capable of carrying on the business of pharmacy efficiently. The pamphlet also contains particulars of the "major" examination, which confers the title of "pharmaceutical chemist" on successful candidates. In addition, it includes information concerning various scholarships and prizes.

## FALLS FROM GREAT HEIGHTS.

FALLS from great heights, not necessarily fatal in their results, are becoming so frequent in these days of aeroplaning that it may prove of interest to refer back to the classics of the subject, which, however, are not as ample as might be expected. Writing in 1841 of a fall from an immense altitude which did not result in death, a French observer, M. Manzini, declares that he had searched in vain in the annals of science for a similar case. We can well believe it. The victim or patient was a *tapissier*, who had been engaged in putting up decorations, on the occasion of the belated obsequies of Napoleon the Great, in the lofty dome of the Church of the Invalides in Paris. When busy moving a ladder on the top of a high scaffolding he overbalanced himself, and, in obedience to some obscure instinct, jumped clear of the ladder and the platform, crying to his fellow workmen, as only a Frenchman would, "Tiens, me voilà parti!" With these cheerful words on his lips, he fell 82 feet, bounding in one place off the roof of a little dome, which caused him to describe a second parabola in the air, and landing finally, feet first, on the slate roof of a small sacristy. Crashing through the slates, he landed astride a rafter, where he was found sitting, surprised but coherent, for he was able to give his name and address when asked for them. He had no recollection of this, and became unconscious when put to bed shortly afterwards under the care of the great Pasquier. His insensibility lasted a very short time, however, and he made an extraordinarily rapid recovery, having sustained no apparent injuries either external or internal. At the end of a month Pasquier found him quite well. Manzini also records the case of his own fall from a great height when a child, and describes the feeling of blindness that came upon him, due to the rapidity of his descent, also the anguish of recovering his breath after it. Others, however, describe their sensations during a tremendous fall as being far from disagreeable. Thus, some nine years ago Professor Heirn, the geologist of Zürich, described "the flood of thought" that traversed his mind during a typical Alpine fall, which began on an inclined plane. He saw beautiful scenes and visions of his past life as he fell, and reflected rationally on his death or the chance of escape. He felt no pain on striking the ground, but he heard a thud, which was the impact of his own head on a rock. Another Alpine faller thought about his insurance and his family. "Of the losing of my breath, of which people talk, there was no suggestion, and only the heavy fall on the snow-covered ground caused me to lose suddenly and painlessly all consciousness." Both these Alpinists insisted on the absence of anxiety from their minds when falling, while one certainly describes sensations similar to those felt by the drowning. Among classic English falls may be mentioned that of a steeple-jack, who in 1800 fell from the top of the church of St. George in Bolton-le-Moors to the ground, the whole distance traversed being some 120 feet. The man's skull struck some sheet lead upon the earth and left its impact upon it, but though this fall was quite unbroken as in the previous cases by scaffolding, rocks, and so forth, the man was only slightly injured and resumed work in a few days.

Recently a man with his boots on fell from the top of a cliff at Dover, the height of which was afterwards found to be 400 feet. He was picked up floating insensible in some five feet of water, but his boots were off, which proves that he must have retained sufficient consciousness on reaching the water to enable him to draw his boots from his feet. Both these cases are well attested. We wish we could be as sure of the truth of the story told of an *ouvrier*, who fell from a fourth-floor window and who, as he passed a lower one, was heard to remark with great rapidity and clearness, "Ca va bien jusqu'à présent pourvu que ça dure!"

## THE ACTION OF ATOXYL ON THE EYE.

THE discovery of the action of atoxyl and other complex organic arsenical compounds upon trypanosomes and spirochætes has caused them to be widely studied and extensively employed in numerous diseases. Unfortunately, atoxyl, in spite of its name and of its undeniable usefulness, has not proved to be entirely harmless, since a considerable number of cases of blindness following upon its use are now on record. These recorded cases are critically studied in an interesting article published in the *Berliner Klinische Wochenschrift* of Oct. 3rd by Dr. Kurt Steindorff of Berlin. He has been able to collect records of as many as 95 cases of disturbance of vision or actual blindness following on the use of atoxyl. It would seem that the onset of the ocular symptoms is often preceded by some evidence of toxic effects—such as general languor, vertigo, headache, vomiting, colicky pains, dysuria or anuria, hypothermia, tinnitus, and deafness. The ocular symptoms comprise a more or less marked diminution of the power of sight, and the field of vision is concentrically diminished, but more on the nasal than on the temporal side. The ophthalmoscopic examination at first gives negative results, save that the retinal arteries may be narrowed, the veins somewhat hyperæmic. After a few weeks the papillæ begin to appear pale, and the condition progresses with uncomfortable rapidity to complete optic atrophy, associated with increasing dimness of vision going on to complete blindness. The prognosis of the ocular symptoms is the more grave from the facts that the immediate stopping of the drug does not, as a rule, suffice to stop the progress of the condition, and that treatment has so far proved unsuccessful. In the majority of cases the blindness must be attributed to the atoxyl and not to the diseases for which it is given, since in most of these optic atrophy is a rare occurrence. It would appear that alcoholism predisposes to the development of atoxyl amblyopia, and that an eye already the subject of latent damage from other poisons, such as arsenic or mercury, is also more likely to be affected. Some cases published by Watermann showing a rapid diminution of vision in cases of tabetic optic atrophy lend some support to this view. A study of the doses and of the intervals of administration of the drug in the recorded cases throw but little light upon the subject. Beck suggests, however, that the most dangerous conditions are those in which small doses are given daily for long periods without intervals, and those where large doses are injected with very short intervals. The method of administration, whether intramuscular, subcutaneous, or subarachnoid, does not appear to exert any special influence upon the incidence of atoxyl amblyopia, nor do questions of sex, age, or severity of the disease for which the drug is given. The pathology of the condition is obscure, but it appears to be a simple progressive atrophy. So far Dr. Steindorff can only find one case recorded—that of Nonne—which has been examined microscopically. Unfortunately, the retina was not examined, but the optic nerve showed symmetrical degeneration by Marchi's method. This extended back to the chiasma. There were no inflammatory manifestations. The question as to whether the arsenic or the anilin constituent of the atoxyl molecule is responsible has been much discussed; both substances do in rare instances lead to ocular disturbance, but this is usually of the nature of an optic neuritis rather than a primary atrophy, as is the case with atoxyl. The general conclusions arrived at by Dr. Steindorff are that the atoxyl exerts its toxic effect directly, or that it is converted in the eye into some more poisonous reduction product. The substance arsacetin, introduced by Ehrlich, although less toxic than atoxyl, is less active therapeutically, and ocular disturbances have even been observed after its use. Dr. Steindorff, while admitting the value of atoxyl and allied substances, counsels the utmost care in their use. His interesting review of the subject has a useful bibliography of the recorded cases attached to it, and affords a valuable study of this important subject.

## THE ROYAL VISIT TO SOUTH AFRICA.

ON Oct. 11th the Duke and Duchess of Connaught left London *viâ* Southampton for South Africa, where His Royal Highness will open the first Union Parliament on Nov. 4th. The programme of the Royal tour, which has just been issued, is a long one. The *Balmoral Castle*, in which the Royal party will travel, will on the outward voyage call at St Helena, where the various visits will include one to the hospital. The programme for South Africa includes the presentation of St. John Ambulance certificates by His Royal Highness and the laying of the foundation-stone of University Hall at Cape Town, a visit to the hospital at Livingstone, a visit to the hospital and schools at Buluwayo, and the laying of the foundation-stone of the new university building at Pietermaritzburg. On Dec. 3rd the Royal party will leave Durban for England.

## ANCIENT ANATOMICAL DRAWINGS FROM TIBET.

THE military expedition which reached Lhasa in 1904 has made us acquainted with some remarkable anatomical drawings of a very early date. A set of these drawings, which were found in the "Temple of Medicine" at Lhasa, was deposited in the India Office Library by Lieutenant-Colonel L. A. Waddell, C.B., I.M.S., together with some thousand volumes of rare and also of unknown treatises, including several on medicine. Lieutenant-Colonel Waddell has given a description of the drawings in the *Asiatic Quarterly Review* for October, 1910, and a faithful copy, made by a native artist, was presented some time ago by Major H. J. Walton, I.M.S., to the Museum of the Royal College of Surgeons of England, where it is now shown in the historical cabinet. The anatomical drawings show many points of affinity with those of early Greece. Some centuries before Alexander's invasion of India (325–27 B.C.) Rawalpindi in Northern India was famous as a place of medical learning, so that there may have been an exchange then between the medical centres of the east and west. In Lieutenant-Colonel Waddell's opinion the anatomical charts now found in Tibet were obtained from Northern India in an early Christian century. The main chart shows three figures, the central being described as a "chart for identification of the internal parts of the body." The right-hand figure, a female, is inscribed, "The method of disposition of the five deep veins for ascertaining the cause (of disease), and the superficial middle vein of the mystical circle of the breast." The left-hand figure, a male, bears the legend, "Delineation of the inner vessels (showing) the mode of connexion of the eight great veins of the hidden systems." The position of the blood and bile vessels in the right and left halves of the male body were supposed to be reversed in the female. The drawings cannot be said to show an accurate knowledge of anatomy. The blood and bile vessels are the parts which receive most attention. The Indian Buddhist origin of the chart is shown

by a row of 12 monks bearing Indian names, represented at the top of the drawing. We congratulate Lieutenant-Colonel Waddell on the interesting contribution which he has made to our knowledge of medicine in ancient India.

## INTERMISSION OF PERNICIOUS ANÆMIA FOR 17 YEARS.

IN the *American Journal of Medical Sciences* for August Professor Alexander McPhedran of Toronto has recorded a case of pernicious anæmia in which there was complete intermission of the symptoms for the remarkably long period of 17 years. The patient was a physician, aged 49 years, engaged in a large country practice. He had been losing strength and growing anæmic for a year or two. He became so ill that he had to cease work in the spring of 1889. There were recurrent chills, a temperature of 104° F., marked delirium, severe vomiting, and diarrhœa. The skin was very pale with a lemon tint. The blood showed the characteristic changes of pernicious anæmia, the red corpuscles numbering 730,000 per cubic millimetre. There were retinal hæmorrhages in both eyes. Arsenic was given in increasing doses until 45 minims of Fowler's solution were taken daily. Improvement took place, and in a month the red corpuscles numbered 1,700,000, and in another month 3,250,000. Five months later the number of red corpuscles was normal and he appeared to have completely recovered and was able to resume practice. He remained well until the autumn of 1906, when he found himself growing weak and unequal to his work. When examined in March, 1907, he was very weak and of yellowish colour. He suffered from constipation with occasional diarrhœa. The red corpuscles numbered 1,926,000, and were generally large; poikilocytosis was marked, and both normoblasts and megaloblasts were present. The hæmoglobin was 39 per cent. He improved rapidly, and by the end of the month the red corpuscles numbered over 3,000,000 and there were no megaloblasts. In the early summer the corpuscles numbered over 4,000,000 and he felt correspondingly improved. He went to the Canadian North-West as far as the Rocky Mountains. Vomiting and diarrhœa were troublesome and he was much prostrated. Under rest he improved and was fairly well on his return in November. He was not seen again until January, 1908. He looked well, although his strength was failing. The appetite was fair, the tongue was clean, there was no stomatitis, the gums were healthy, the teeth having been removed some years previously. There was some diarrhœa for a day or two every fortnight; the stools were liquid but not offensive. The red corpuscles numbered 3,500,000 and showed only slight variation in size and shape. From this time he became gradually worse, with slight improvement for a few days from time to time. Vomiting frequently occurred. He became semi-conscious and died at the end of a month on May 17th, 1908, at the age of 68 years, over 20 years after the first symptoms appeared. He recovered from these, and remained in good health for 17 years, but during this period there was no opportunity for blood or other examination as he felt quite well and considered such unnecessary. A necropsy was not granted. The duration of the disease and the length of the intermission appear to be the longest recorded in the literature of pernicious anæmia. Indeed, the latter was so long that Professor McPhedran regarded the case as an example of permanent recovery, and had the patient died from pneumonia or other cause the case could with good reason have been so recorded. He suggests that in all the cases of permanent recovery claimed a relapse would have occurred if the patient were not cut off by some intercurrent disease, and he therefore differs from the statement made by Professor W. Osler: "When a patient has been six years free from trouble it seems safe to conclude that no recurrence will occur." The present case is a striking illustration of the uncertainty of the course and duration of pernicious anæmia. In many cases the prostration has been so great that death has been daily expected, and yet recovery has quickly taken place to the extent that the patients could resume work. As to the value of arsenic, Professor McPhedran finds that it is in the more acute cases, if in any, that it is beneficial. In these there are the symptoms of an acute toxæmia—fever, vomiting, diarrhœa, and often delirium. The arsenic is well borne, and as soon as the vomiting and diarrhœa cease improvement is often rapid. In the more chronic cases with progressive symptoms, often without acute irritative attacks but running slowly a downward course, he finds that arsenic is seldom beneficial, and causes stomatitis and gastro-intestinal disturbance. This is illustrated by the present case; in the first acute attack arsenic was well borne and recovery was rapid, not necessarily because of the arsenic; in the second attack even small doses caused stomatitis and epigastric distress.

## REST-CURES FOR THE POOR.

A CORRESPONDENT has recently drawn attention in the press to the defect which exists in this country in the provision of accommodation for those of the sick poor whose affections require treatment by rest. That neurasthenia and analogous disorders exist among the class from which hospital out-patients are drawn there can be no sort of doubt, for the out-patient departments of the general hospitals furnish numerous examples, while the similar departments of the special hospitals dealing with nervous disorder overflow with such cases. Without committing ourselves to an opinion that the "work-shy" are invariably of a neurasthenic diathesis, we are sure we are not over-stating the case when we affirm that many such are incapable of work because they present just those symptoms which are characteristic of some of the functional disorders. The effect of being out of work is well known among those who labour for the benefit of the unemployed. No matter how willing a man may be to work, he is, after the privations and anxieties of a period of unemployment, incapable of the quantity or quality of effort which he was wont to exhibit in former times, and it is found to be idle to expect it of him. But it is scarcely for such cases as these that provision for treatment is demanded. There is a very large number of individuals whose daily work is beyond their physical capacity and who, further than this, are harassed by temporary or, worse still, long-continuing worry. Such factors as these are alone sufficient to produce nervous exhaustion, and if they are assisted in their nocuous action by the weakly character of the nervous system of the particular person who is subjected to them, disaster is very likely to ensue. Some small provision is, in fact, made for the treatment of patients of this class. Very occasionally they may be found in the wards of a general hospital, and rather more frequently in the wards of the three hospitals devoted to the treatment of nervous disorder which exist in London. There can be but little doubt that if these particular hospitals, instead of being almost constantly pressed for money, met with more general support far more could be done in the provision of rest-cures for the poor than is now possible. We have from time to time expressed a hope that the day may not be far distant when advantage may be taken of the generous gift made, now some years ago, by Dr. Henry Maudsley for the purpose of building a hospital for mental disorder. Our own aspirations are for an institution which may combine out-patient departments, wards for the treatment of organic nervous disorder, functional nervous disorder, and mental

disorder—if the two latter can in fact be separated legitimately one from the other—a department designed for the reception of those for whose lesions there is no hope of repair, and lastly, teaching and pathological departments. In such an institution there might be hopes of ample accommodation for those requiring rest-cures. Institutions of like character are possible in lesser and poorer cities in other countries, and we see no reason why Dr. Maudsley's gift should not be utilised as a basis upon which to rear in the largest city in the world such a structure as we have outlined.

## A SCHOOL STRIKE.

COMPLAINTS are not seldom heard of the difficulty of impressing parents of the working-classes with the necessity for sanitary precautions in the matter of infectious disease. At Booker, near High Wycombe, however, the lesson appears to have been learnt almost too well, for the zeal of the fathers and mothers to protect their children who should be attending the council school has recently reduced the attendance there from 100 to 20 scholars, owing to the fear that they may become infected by contact with the children of the caretaker at the local isolation hospital. It is stated that the parents refuse to be convinced by the school medical officer, and that they not only decline to send their children to the school, but have combined in censuring the sanitary authority for employing as caretaker a man with a young family. The strike, if such it may be called, must have met with willing support on the part of the children, who are probably not otherwise composed of strict sanitarians, and who possibly do not pay as willing attention to measures useful for preserving their health, such as brushing their teeth and observing personal cleanliness, as they do to their parents' desire that they should enjoy a holiday.

## THE ACTION OF HUMAN FŒTAL EXTRACTS UPON MALIGNANT TUMOURS IN MAN.

Dr. Fichera, continuing his research work on the biology of implantations of fœtal and neoplastic tissues, contributes to the *Policlinico* an important paper on the Action of the Products of the Autolysis of Human Fœtal Tissues upon Malignant Tumours in Man. Previous experiment on rats had shown the resistance which could be induced in otherwise susceptible rats to implantation of malignant tumours by previous implantation of fœtal tissues, and, further, that injection of the products of autolysis of such tissues could inhibit the growth of implantations of malignant tumours, implantations which in the ordinary course of events would have invariably caused death. The observations upon the human subject were begun in September, 1909. Thirty-six cases have been treated, all past surgical cure; 29 had been previously operated on. In all cases the diagnosis was established histologically, and in all cases during the progress of the case microscopic examinations were made of fragments removed by excision, in some cases as often as eight times. Of the 36 cases, 14 abandoned the treatment almost at the commencement for various reasons; 4 cases, though favourable, were of too recent date to pronounce upon, so that 18 cases remain. Of these, 8 have shown no improvement. Of the other 10, 5 are reported cured and 5 are well on the way to complete cure. The 5 complete cures are composed of 3 cases of carcinoma of the breast with multiple metastases, 1 case of carcinoma of the terminal portion of the rectum, and 1 adeno-carcinoma of the thyroid gland. The injection may be given either at the site of the disease or at a distance. Injections at the site of the disease give rise to areas of hæmorrhage and necrosis, while injections given elsewhere in the body cause mainly cytolysis with a moderate growth of connective tissue to replace the tumour. Metastases are often extremely sensitive to the autolytic action and may disappear without leaving any trace. Large tumours, on the other hand, require a long course of treatment before the malignant growth is wholly replaced by connective tissue, and especially where local injections have been practised there may remain a large tumour of sclerotic connective tissue in place of the original growth. The constitutional effects of the injection are very different, according as to whether they are made into the tumour or at a distance; in the former case there may be a sharp rigor with temperature 102° to 104° F., while the same dose given in some other part of the body will give rise to no disturbance. This initial disturbance Dr. Fichera considers a toxic phenomenon, and explains its production in the case of local injections by the abundance and fragility of the vessels in the tumour, and by the possible entrance into the circulation of the products of the cytolysis of the new growth. The action of the fœtal extract he considers direct and selective, and gives a number of good reasons for this view. From this follows a relation between the dose injected and the size of the tumour. To avoid the use of too big a dose he has recourse to the more energetic action of the injection at the site of the disease; also in the case of large tumours he would advise excision of the tumour in addition to treatment by injection. The extracts used were made from fœtuses of from two to six months of intra-uterine life. The tissues are placed in physiological saline solution with the addition of a certain quantity of thymol or carbolic acid, and sterile olive oil or toluol is placed on the top. The mixture is kept in the thermostat at 37° for about two months. The dose is 2 or 3 cubic centimetres, and this is injected from two to four times a week. The treatment lasts a variable number of months.

## ISABEL THORNE.

MEDICAL women have lost a valued friend and supporter by the death of Mrs. Isabel Thorne, who for more than 30 years was honorary secretary to the London School of Medicine for Women. Her early married life was spent in the East, and she soon became aware of the need for medical women in India and China. On her return to England about 1868 she endeavoured herself to obtain a medical qualification, but at that time no medical school would admit women, nor were qualifying examinations open to them in Great Britain. Miss Elizabeth Garrett had obtained the L.S.A. diploma, but this privilege had been denied to other women. In 1869 the Senate of the University of Edinburgh decided to admit women to the study of medicine in separate classes, and Mrs. Thorne, with others, went to Edinburgh. The following unanswerable and eloquent appeal made by Sophia Jex-Blake, a medical student at Edinburgh, and published in THE LANCET of July 9th, 1870, will serve to show the position taken up by women students and the nature of the opposition they had to overcome. "State clearly what attainments you consider necessary for a medical practitioner; fix your standard where you please, but define it plainly; put no obstacles in our way; either afford us access to the ordinary means of medical education, or do not exact that we shall use your special methods; in either case subject us ultimately to exactly the ordinary examinations and tests, and if we fail to acquit ourselves as well as your average students reject us; if, on the contrary, in spite of all difficulties, we reach your standard, and fulfil your requirements, the question of 'mental equality' is practically settled so far as it concerns our case; give us, then, the ordinary medical licence or diploma and leave the question of our ultimate success or failure in practice to be decided by ourselves and the

public." Unfortunately for the adventurous band of lady medical students in Edinburgh the General Council of the University, by a majority of one, rejected the proposal to admit women to the same classes and privileges with men as students of medicine. The next step was to start a school of medicine for women in London, and Mrs. Thorne became its honorary secretary, living to see her life's work crowned with success and rewarded by the knowledge that it had achieved a safe place and recognition among metropolitan medical schools.

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THE Gresham Lectures, consisting of four lectures on Ancient and Modern Surgery, will be delivered by Dr. F. M Sandwith, Gresham Professor of Physic, on Oct. 25th, 26th, 27th, and 28th, at the City of London School, Victoria Embankment, E.C. The lectures are free to the public and will begin each evening at 6 o'clock.

WE regret to announce the death of Dr. John Anderson, C.I.E., the well-known authority on tropical diseases, which took place on Monday last, Oct. 10th. He had been a complete invalid for many months.

MEDICAL GOLF AT BATH.—A match was played at Bath last week between teams representing the medical men of Bath and Bristol respectively, and resulted in a very easy win for the latter team.

# RADIUM AND RADIO-ACTIVITY.

ABSTRACT OF AN ADDRESS BY DR. GUYENOT.

AN interesting lecture directing attention to the therapeutic application of radio-active substances was recently delivered to the Medical Society of Aix-les-Bains by Dr. Guyenot, director of the Physio-Therapeutic Institute of that place. The lecturer, after giving an attractive sketch of the history of the discovery of radium and of the investigations which led to the revelation of its remarkable properties, proceeded to describe its physiological action, the first evidence of which, he said, was on the skin, as M. Becquerel found to his cost on several occasions. The tips of his fingers, which had come into contact with tubes and capsules containing radio-active substances, became hard, white, and very tender. The inflammation lasted about a fortnight and was followed by shedding of the skin. The tenderness, however, persisted for upwards of two months. Becquerel, too, was the victim of another accident which has become famous. In April, 1901, he took up a tube containing very radio-active chloride of barium and put it in his waistcoat pocket. His assistant warned him that it was somewhat risky, but he paid no attention and went off with the tube. It was a sealed tube wrapped in paper and enclosed in a cardboard box. The rays, though weakened by the several layers, were powerful enough to excite phosphorescence through his clothes. M. Becquerel kept the tube in his pocket six hours, and a few days later, without having felt any pain, he noticed a patch of redness on the skin, which gradually grew darker, its outline corresponding to the shape of the tube. The skin was shed on April 24th, leaving a suppurating wound which took 45 days to heal. During this time a second oblong patch made its appearance, corresponding to another corner of the pocket that had held the barium. It having been less exposed to the action, the inflammation did not supervene until 35 days after the contact and was only superficial. This action of radium on the skin has led surgeons to try its effect in the external treatment of certain skin diseases and tumours of various kinds. These burns are similar to those produced by the X rays, with the same period of incubation, running the same course, and ending in the same way.

In regard to the action of radium on bacteria, X rays are not bactericidal, whereas radium is markedly so, especially certain of its rays (the alpha rays). Ashkinass and Strebel found that cultures of B. prodigiosus were attenuated by radium rays. Caspari tried the effects of radio-active injections on tubercle bacilli introduced into the anterior chamber of the eye of a guinea-pig and on the diphtheria organism introduced into the muscles and no infection followed. Pfeiffer and Friedberger placed 25 milligrammes of bromide of radium, with a radio-activity of 50,000, 6 centimetres from a culture of the typhoid bacillus for 24 hours without any result, but at a distance of 1 centimetre the growth was completely arrested. Similar experiments carried out by Hoffmann arrested the development of the staphylococcus and the bacillus anthrax. As regards the action of radium on ferments and toxins, the rays act in different ways on the various ferments. Some lose their efficacy, while others are not affected or are rendered more active. Invertin and emulsin (Victor Henri and André Mayer), hæmolysin (Danysz) and lactic fermentation (Ch. Richet) are attenuated, while, on the contrary, proteolytic ferments, pepsine and pancreatin (Bergell and Braunstein) are rendered more active. According to Tizzoni and Bongiovanni, the rays exert a very marked influence on the virus of hydrophobia. Not only do infected spinal cords that have been exposed to the rays no longer transmit the disease, but they can be utilised for vaccinating purposes. Phisalix tested the influence of radium emanation on the toxicity of venoms and found that while serpent venom lost its toxicity, those of the salamander and toad were not affected thereby.

As to the action of radium on the nervous system, this is seen in the fact that when small animals are exposed thereto we get certain nervous symptoms. When X rays are brought to bear on small animals we often get symptoms of paraplegia, but only when intense radio-dermatitis has been produced, so that we are not in a position to distinguish between a direct and a transmitted nervous lesion. No such difficulty presents itself with regard to radium, the central nervous system being vastly more sensitive to its influence than is the skin. For instance, by the introduction beneath the skin of a mouse a month old of a tube containing about 1 centigramme of radium with a radio-activity of 500,000, placed exactly over the spinal column and part of the skull, within three hours we get symptoms of paralysis. In seven or eight hours the mouse is seized with convulsions, and if the tube be left *in situ* these become more and more frequent and the animal dies in from 12 to 18 hours. Mice a year old do not die for from six to ten days. The lesions appear to vary according to the age of the animals, and according as the nervous system is or is not protected by bony or cartilaginous tissue. Death is rapid in young animals, whereas in adults it is slow, or we may only get atrophic lesions (London). The larvæ of insects placed in glass boxes along with a tube of radium are paralysed in 24 hours and die in two or three days, and here, again, it is the nervous system that seems to suffer most (Danysz). M. Danysz also investigated the action of radium on small animals at a distance, and he found that the effects were much the same but took longer to be produced. Experiments have been carried out to ascertain the action of radium on the peripheral nerves. Beck applied a tube of radium over the trunk of the sciatic nerve of 13 rabbits and five dogs. In eight complete anæsthesia and analgesia were produced. Rehns found that sensation returned in the anæsthetic patches of tabetic patients when radium was applied. Zimmern and Professor Raymond succeeded in attenuating lightning pains and the hyperæsthesia in neuralgia and neuritis. This latter fact had been previously noted by Darier, who relieved the pain in several cases of facial neuralgia by the application of radium. Radium has an action on the retina, on the reproductive glands, on the lymphoid organs, and on the blood.

The physiological action of the emanation and induced radio-activity is well known. Radium produces the emanation persistently without any appreciable loss of weight, so that we have here a practical means of utilising radio-activity in the form of the emanation. Curie and Danysz investigated this action on particular organisms. Caterpillars placed in a tube of the emanation were paralysed much in the same way as by the radium rays. Bouchard, Curie, and Balthazard made similar experiments with guinea-pigs and mice, and the animals died after a stage of loss of heat and torpor. The rapidity with which the fatal result is produced depends on the quantity of emanation contained in the atmosphere in which the animals are placed. London obtained similar results with frogs and mice. The emanation is perhaps more rapidly microbicidal than the direct rays. Danysz killed with it a culture of anthrax bacillus. Dorn, Raumann, and Valentiner found that the emanation in a gaseous form arrested the growth of the typhoid bacillus on gelose and killed it outright in solid media and in culture bouillon through which the gas was allowed to bubble. Mouse typhus, the comma bacillus, and the diphtheria bacillus are similarly affected. The physiological action of the emanation introduced into the organism has been studied more especially in Germany. Madame Anna Laska carried out a series of experiments at the Charity Hospital at Berlin and reports the following results: Rabbits were given by the mouth or by intravenous injection radio-active water—i.e., water that had been rendered radio-active by the radium emanation. The amount of emanation introduced into the blood current was soon eliminated *viâ* the lungs. This result is in accordance with theory, which would lead us to expect the emanation to escape through the lungs. It also proves that the emanation taken by the mouth remains in the organism longer than when injected into the veins, no doubt owing to the fact that in the digestive tract the emanation is only gradually absorbed. Examination of the blood in the course of these experiments yielded the following results. In one case in which the animal had been given 120 centimetres of radio-active water a tangible proportion was found in the blood. In all the other cases the quantity of emanation was so small that it could not be measured. This is explained by the fact that the emanation no sooner gets into the blood than it is got rid of in the breath. Several investigators have discovered traces of the emanation in the urine. Examination of the fæces revealed the fact that a tangible amount of the emanation taken by the mouth is eliminated *viâ* the intestine. The stomach, liver, and cartilages contain insignificant quantities of emanation.

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WE have learned to our great regret of the death of Professor Ernst von Leyden, the successor of Traube at the Berlin Clinic. His address at the Twelfth International Medical Congress at Moscow in 1897 on "Contemporary Methods in the Treatment of Tuberculosis," in which he advocated the notification of phthisis and maintained that all the various points in a successful scheme of treatment were only obtainable in a properly conducted sanatorium, drew much attention at the time and formed the subject of a leading article in our columns.

THE opening address of the winter session at the Central London Throat and Ear Hospital will be given at 4.30 P.M. on Monday, Oct. 17th, by Dr. Purves Stewart on Certain Intracranial Diseases associated with Nasal, Aural, and Laryngeal Symptoms, illustrated by lantern slides. The annual dinner of the medical staff of the hospital will take place the same evening at the Trocadéro Restaurant, when Mr. W. Stuart-Low will occupy the chair. Past and present students desiring to attend are invited to apply to the secretary.

THE Gresham Lectures, consisting of four lectures on Ancient and Modern Surgery, will be delivered by Dr. F. M Sandwith, Gresham Professor of Physic, on Oct. 25th, 26th, 27th, and 28th, at the City of London School, Victoria Embankment, E.C. The lectures are free to the public and will begin each evening at 6 o'clock.

WE regret to announce the death of Dr. John Anderson, C.I.E., the well-known authority on tropical diseases, which took place on Monday last, Oct. 10th. He had been a complete invalid for many months.

MEDICAL GOLF AT BATH.—A match was played at Bath last week between teams representing the medical men of Bath and Bristol respectively, and resulted in a very easy win for the latter team.

# RADIUM AND RADIO-ACTIVITY.

ABSTRACT OF AN ADDRESS BY DR. GUYENOT.

AN interesting lecture directing attention to the therapeutic application of radio-active substances was recently delivered to the Medical Society of Aix-les-Bains by Dr. Guyenot, director of the Physio-Therapeutic Institute of that place. The lecturer, after giving an attractive sketch of the history of the discovery of radium and of the investigations which led to the revelation of its remarkable properties, proceeded to describe its physiological action, the first evidence of which, he said, was on the skin, as M. Becquerel found to his cost on several occasions. The tips of his fingers, which had come into contact with tubes and capsules containing radio-active substances, became hard, white, and very tender. The inflammation lasted about a fortnight and was followed by shedding of the skin. The tenderness, however, persisted for upwards of two months. Becquerel, too, was the victim of another accident which has become famous. In April, 1901, he took up a tube containing very radio-active chloride of barium and put it in his waistcoat pocket. His assistant warned him that it was somewhat risky, but he paid no attention and went off with the tube. It was a sealed tube wrapped in paper and enclosed in a cardboard box. The rays, though weakened by the several layers, were powerful enough to excite phosphorescence through his clothes. M. Becquerel kept the tube in his pocket six hours, and a few days later, without having felt any pain, he noticed a patch of redness on the skin, which gradually grew darker, its outline corresponding to the shape of the tube. The skin was shed on April 24th, leaving a suppurating wound which took 45 days to heal. During this time a second oblong patch made its appearance, corresponding to another corner of the pocket that had held the barium. It having been less exposed to the action, the inflammation did not supervene until 35 days after the contact and was only superficial. This action of radium on the skin has led surgeons to try its effect in the external treatment of certain skin diseases and tumours of various kinds. These burns are similar to those produced by the X rays, with the same period of incubation, running the same course, and ending in the same way.

In regard to the action of radium on bacteria, X rays are not bactericidal, whereas radium is markedly so, especially certain of its rays (the alpha rays). Ashkinass and Strebel found that cultures of B. prodigiosus were attenuated by radium rays. Caspari tried the effects of radio-active injections on tubercle bacilli introduced into the anterior chamber of the eye of a guinea-pig and on the diphtheria organism introduced into the muscles and no infection followed. Pfeiffer and Friedberger placed 25 milligrammes of bromide of radium, with a radio-activity of 50,000, 6 centimetres from a culture of the typhoid bacillus for 24 hours without any result, but at a distance of 1 centimetre the growth was completely arrested. Similar experiments carried out by Hoffmann arrested the development of the staphylococcus and the bacillus anthrax. As regards the action of radium on ferments and toxins, the rays act in different ways on the various ferments. Some lose their efficacy, while others are not affected or are rendered more active. Invertin and emulsin (Victor Henri and André Mayer), hæmolysin (Danysz) and lactic fermentation (Ch. Richet) are attenuated, while, on the contrary, proteolytic ferments, pepsine and pancreatin (Bergell and Braunstein) are rendered more active. According to Tizzoni and Bongiovanni, the rays exert a very marked influence on the virus of hydrophobia. Not only do infected spinal cords that have been exposed to the rays no longer transmit the disease, but they can be utilised for vaccinating purposes. Phisalix tested the influence of radium emanation on the toxicity of venoms and found that while serpent venom lost its toxicity, those of the salamander and toad were not affected thereby.

As to the action of radium on the nervous system, this is seen in the fact that when small animals are exposed thereto we get certain nervous symptoms. When X rays are brought to bear on small animals we often get symptoms of paraplegia, but only when intense radio-dermatitis has been produced, so that we are not in a position to distinguish between a direct and a transmitted nervous lesion. No such difficulty presents itself with regard to radium, the central nervous system being vastly more sensitive to its influence than is the skin. For instance, by the introduction beneath the skin of a mouse a month old of a tube containing about 1 centigramme of radium with a radio-activity of 500,000, placed exactly over the spinal column and part of the skull, within three hours we get symptoms of paralysis. In seven or eight hours the mouse is seized with convulsions, and if the tube be left *in situ* these become more and more frequent and the animal dies in from 12 to 18 hours. Mice a year old do not die for from six to ten days. The lesions appear to vary according to the age of the animals, and according as the nervous system is or is not protected by bony or cartilaginous tissue. Death is rapid in young animals, whereas in adults it is slow, or we may only get atrophic lesions (London). The larvæ of insects placed in glass boxes along with a tube of radium are paralysed in 24 hours and die in two or three days, and here, again, it is the nervous system that seems to suffer most (Danysz). M. Danysz also investigated the action of radium on small animals at a distance, and he found that the effects were much the same but took longer to be produced. Experiments have been carried out to ascertain the action of radium on the peripheral nerves. Beck applied a tube of radium over the trunk of the sciatic nerve of 13 rabbits and five dogs. In eight complete anæsthesia and analgesia were produced. Rehns found that sensation returned in the anæsthetic patches of tabetic patients when radium was applied. Zimmern and Professor Raymond succeeded in attenuating lightning pains and the hyperæsthesia in neuralgia and neuritis. This latter fact had been previously noted by Darier, who relieved the pain in several cases of facial neuralgia by the application of radium. Radium has an action on the retina, on the reproductive glands, on the lymphoid organs, and on the blood.

The physiological action of the emanation and induced radio-activity is well known. Radium produces the emanation persistently without any appreciable loss of weight, so that we have here a practical means of utilising radio-activity in the form of the emanation. Curie and Danysz investigated this action on particular organisms. Caterpillars placed in a tube of the emanation were paralysed much in the same way as by the radium rays. Bouchard, Curie, and Balthazard made similar experiments with guinea-pigs and mice, and the animals died after a stage of loss of heat and torpor. The rapidity with which the fatal result is produced depends on the quantity of emanation contained in the atmosphere in which the animals are placed. London obtained similar results with frogs and mice. The emanation is perhaps more rapidly microbicidal than the direct rays. Danysz killed with it a culture of anthrax bacillus. Dorn, Raumann, and Valentiner found that the emanation in a gaseous form arrested the growth of the typhoid bacillus on gelose and killed it outright in solid media and in culture bouillon through which the gas was allowed to bubble. Mouse typhus, the comma bacillus, and the diphtheria bacillus are similarly affected. The physiological action of the emanation introduced into the organism has been studied more especially in Germany. Madame Anna Laska carried out a series of experiments at the Charity Hospital at Berlin and reports the following results: Rabbits were given by the mouth or by intravenous injection radio-active water—i.e., water that had been rendered radio-active by the radium emanation. The amount of emanation introduced into the blood current was soon eliminated *viâ* the lungs. This result is in accordance with theory, which would lead us to expect the emanation to escape through the lungs. It also proves that the emanation taken by the mouth remains in the organism longer than when injected into the veins, no doubt owing to the fact that in the digestive tract the emanation is only gradually absorbed. Examination of the blood in the course of these experiments yielded the following results. In one case in which the animal had been given 120 centimetres of radio-active water a tangible proportion was found in the blood. In all the other cases the quantity of emanation was so small that it could not be measured. This is explained by the fact that the emanation no sooner gets into the blood than it is got rid of in the breath. Several investigators have discovered traces of the emanation in the urine. Examination of the fæces revealed the fact that a tangible amount of the emanation taken by the mouth is eliminated *viâ* the intestine. The stomach, liver, and cartilages contain insignificant quantities of emanation.

Another author, Dr. Silbergleit, carried out a series of experiments at the Medico-Policlinic at Berlin in order to ascertain the influence of the emanation on organic exchanges. Radiogenic water was administered to three young men free from any rheumatic or gouty taint. No. 1 took his radiogenic water after lunch, composed of bread and meat, followed by complete rest. No effect on the gaseous exchanges was noted. In the two others the radiogenic water was given on an empty stomach in the morning, still with the subject at rest. In both there was a notable increase of the gaseous exchanges.

Uric acid, as we know, circulates in the blood in the form of urate of soda, of which there are two isomeric forms, differing from each other by their respective solubility in the blood plasma. The soluble salt is converted into the insoluble form. In gout and similar states this transformation is so rapid that the normal excretion of the uratic salt is unable to take place. Dr. Gudzent investigated the effects of the emanation and found that the conversion of the soluble into the insoluble salt was notably checked and did not set in again until the emanation had been eliminated. A course of treatment with radiogenic water would consequently seem capable of preventing the deposit of urates in the tissues and so conceivably obviate the recurrence of attacks of gout.

Dr. Nagelschmidt and Dr. Kohlrausch have published the results of their researches bearing on the physiological influence of radium-therapy, and arrived at the following conclusions. The emanation of radium may be regarded as a gas capable of absorption by the lungs, the stomach, and the intestine. The greater part of the emanation is eliminated *viâ* the breath in a comparatively short time, a small part escaping in the fæces, and a still smaller part being stored up in the liver and bile. As long as the emanation remains in the organism it gives off rays that permeate the tissues and produce exactly the same effects as radium rays. Curie and Laborde ascertained the proportion of radium emanation contained in the gases and waters of a number of thermal springs, and various authors have investigated the biological action of mineral waters laden with emanation, and recognise that they exert a stimulating influence on the ferments of the economy. As Laborde remarks, we cannot but be struck by a coincidence that almost amounts to a revelation when we find that the mineral waters so far found to be most radioactive are those with low mineral contents. This seems to justify the assumption that the well-marked effects obtained at various mineral water stations are possibly due to the radio-activity of the waters, since they cannot be due to the small proportion of mineral constituents. This seems the more probable, judging from Löwenthal's experiments, who gave healthy men a certain quantity of water laden with emanation without the production of any tangible effect, whereas in persons suffering from chronic articular rheumatism it determined a febrile attack with pain and swelling of the joints.

There are several ways of employing radium in therapeutics. It is in surgery that it was first turned to account. The extremely violent action of radium on the tissues renders special precautions necessary. First we must apportion the quantity of rays to be brought to bear in each case, then we must protect the healthy tissues against the unnecessary and injurious action thereof. Lastly, the method of application varies according to the individual requirements. It must be borne in mind that the rays emanating from radium are not simple, they comprise several kinds of rays which differ from each other by their mode of action and by the degree of penetration into the living tissues. This has led specialists to devise special instruments and appliances, as complicated as they are ingenious. Radium seems to exert a specific action on cancerous and angiomatous tumours. It has yielded remarkable results in certain forms of cancer, in keloids and vicious scars, in angiomata and pigmented nævi, in cutaneo-mucous tuberculosis, and in certain varieties of chronic, pruriginous, inflammatory dermatosis.

According to Dominici and Gy, radium gives good results in gonorrhœal arthritis, obstinate neuralgia, and neuritis. As to the internal and external use of the emanation, however, we are no longer on sure scientific grounds In passing, it may be mentioned that radium emanation is contained in a certain number of natural mineral waters, and this cannot surprise us because a sheet of underground water may conceivably come into contact with radiferous earths and so acquire the properties of induced radio-activity. It is, indeed, interesting to note that certain mineral waters which are recognised to be very efficacious are precisely those containing comparatively large quantities of emanation. The radio-activity of mineral waters only exists at the source, for the water soon loses its borrowed properties. Possibly this may explain why there is such a difference between the therapeutical effects of mineral waters "consumed on the premises" and those drunk at home.

Numerous physicians began to try whether water that has been rendered artificially radio-active is capable of exerting a beneficial action in affections in which the naturally radioactive mineral waters display most efficacity, among them being Dautwitz, Lowenthal, Laqueur, Kraus, Jacobs, Bergel, and Bickel. Dr. Lowenthal remarks, and the observation is worthy of note, that waters rendered artificially radio-active provoke a reaction characterised by an increase of the pain and the reappearance of inflammatory symptoms in the originally damaged joints. This reaction corresponds exactly to a phenomenon with which we are familiar in the thermal treatment of rheumatic and gouty affections. Radium cannot very well be utilised as such for internal administration, in consequence of its intense action on living tissues, and this has led physicians to make use of the emanation in internal radium-therapy as well as for certain external applications. The problem has been solved by the construction of emanation apparatus. In these the radium is surrounded by water, to which it communicates uniform qualities of emanation. The quantity of emanation in this water can be measured in units by the electroscope. The emanation apparatus consequently produces a solution of the emanation in stated doses, and such water can be used for baths or taken internally, or it can be utilised to increase the radio-activity of a mineral water, to be employed as directed.

The external application of the emanation may take the form of baths, compresses, or mud poultices. With regard to baths, it is probable that the effects are due to inhalation of the emanation in the water vapour and not to transcutaneous absorption. The prescribed quantity of radioactive water is added to a bath at the ordinary temperature in which the patient is left for about half-an-hour, stirring the water frequently. Compresses are prepared of various sizes. Before being applied they are steeped in boiling water, wrung out and placed round the joint or over the nerve trunk, waterproof being placed outside. To be left *in situ* 12 hours. The compress can only be used once and the process of reinforcing it takes some four days. Radioactive mud is a very convenient mode of application. It is prepared by mixing powdered pitchblende with twice its volume of hot water. This is applied direct to the part to be treated; it is easy to use and can be left on several hours under a piece of waterproof. This mud exerts a sedative effect and is believed to promote the absorption of exudations. It does not excite any irritation of the skin or give rise to inconvenient reaction, its radio-activity is permanent, but when it has been used it must be allowed to dry for a fortnight before using again.

The emanation can be given in two ways—viz., as a drink and by inhalation. The prescribed number of units is obtained by adding a suitable quantity of radiogenous water to a mineral water, which must be drunk forthwith, taking care not to shake it up too much. Patients who are taking large doses must be closely watched and in presence of symptoms of violent reaction the treatment must be modified or suspended. For inhalations a special apparatus is employed, the radiogenous water being heated and the vapour inhaled by the patient. Each sitting lasts three or four minutes.

What, then, are the principal indications for the therapeutical application of radium? On comparing the results obtained in Germany and in France one cannot but be struck by the singular unanimity of views of the observers, all the more so, seeing that this concordance is rather rare in medicine. It is to be noted that the Germans do not quote French investigators, nor the French German authorities; moreover, the researches were carried out at about the same period. The German school lay down the following indications: (1) muscular rheumatism, chronic and subacute articular rheumatism, and all forms of chronic arthritis; (2)

gonorrhœal arthritis and rheumatism; (3) neuralgia, especially sciatica, neuritis, and the lightning pains of locomotor ataxy; (4) catarrhal affections of the respiratory tract, pharynx, and larynx; and (5) affections of the frontal and maxillary sinuses. The French indications have been summed up by Dr. Claude, of the St. Louis Hospital, as follows: (1) rheumatoid arthritis; (2) gonorrhœal rheumatism; (3) various arthropathies; (4) diseases of the nervous system; and (5) certain cutaneous and gynæcological affections. The only difference to be noticed between the French and German authors is in the mode of application. In France the treatment consists mainly of baths and mud poultices, whereas in Germany considerable importance is attached to the ingestion of water laden with emanation.

# THE FIFTH INTERNATIONAL CONGRESS OF OBSTETRICS AND GYNÆCOLOGY,[1]

HELD IN ST. PETERSBURG UNDER THE AUGUST PATRONAGE OF HIS IMPERIAL MAJESTY THE CZAR OF ALL THE RUSSIAS.

THE following delegates from Great Britain and Ireland were present at the Congress: Dr. Amand J. Routh (London), representing the Royal College of Physicians of London, the Royal College of Surgeons of England, Charing Cross Hospital Medical School, and the Obstetrical and Gynæcological Section of the Royal Society of Medicine; Dr. Thomas Wilson (Birmingham) and Dr. Jervois Aarons (London), representing the Royal Society of Medicine; Dr. Edward Malins, representing the University of Birmingham; Sir Alexander R. Simpson, representing the Edinburgh Obstetrical Society; and Mr. M. G. McElligott, representing the Royal College of Surgeons in Ireland.

On Sept. 21st in the large Alexander Hall of the Hotel de Ville a reception was held by the municipality. The Mayor, I. I. GLAZOONOFF, who received the guests together with the members of the municipality, welcomed the members of the Congress as individuals who, he said, were fighting for the health of their wives, mothers, sisters and daughters, and who were therefore appreciated by all, because the health of a woman is a care for which every gynæcologist strives.

On Sept. 22nd the Congress was opened with the Russian National Hymn. The president of the committee of organisation, Professor Dm. O. OTT, expressed his satisfaction that the Congress which had been twice delayed could now at last take place, and spoke of the institute, which is a building of the highest technical perfection and which is destined to be the perfection of obstetrics and gynæcology in Russia. Next the honorary curator and administrator of the Imperial Clinical Institute of Gynæcology and Obstetrics, General-Lieutenant ANTCHOOTIN, declared the Congress open, whereupon the Mayor again welcomed the members of the Congress.

The chief secretary of the Congress, Professor P. SADOVSKY, read his report. He mentioned the difficulties in arranging the Congress in the year 1905 because of the revolution in Russia, and in this year because of the cholera. But now, thanks to his Majesty the Emperor and to all the Members of the Government, as well as to the committee of the Congress, it was possible to have a reunion of many eminent members of the gynæcological and obstetrical profession. Professor Sadovsky mentioned with regret the names of several gynæcologists who had died since the last Congress—Kufferath, Pfannenstiel, Budin, Edebohls, Engelman, Etheridge, Porro, Reverdia, Skene, Acconci, Rösthöm, Barnes, and Macan. He proposed in the name of the committee to form a Society of the International Congress of Gynæcology and Obstetrics to assure a regular convocation of congresses, and to prevent such delays as had happened with this Congress.

In order to allow the members of the Congress to make better and more intimate acquaintance with each other one of the *salons* of the Hôtel d'Europe was reserved for their exclusive use.

[1] We are indebted to Dr. Jervois Aarons for furnishing us, through Dr. H. Macnaughton Jones (Honorary President for Great Britain), with a précis of the proceedings of this Congress, from which the following notes are abstracted.

## THURSDAY, SEPT. 22ND.

### FIRST SESSION.

*Presidents of honour:* Professor BEUTTNER (Geneva), Dr. BUMM (Berlin), and Dr. DÖDERLEIN (Munich).

Professor LUIGI MANGIAGALLI (Milan) read a paper on

*The Therapeutics of Inoperable Cancer of the Uterus.*

He said: In cases when surgical intervention is not possible or not to be recommended we possess many means which seem to impede if not to stop completely the progress of a neoplasm, and which give us hope for the future—namely, pharmacotherapy (mercury, arsenic, condurango, chelidonium majus, quinine, charcoal, cholesterin), jequirity, opotherapy (orchidean and thyreoidean), fermentotherapy (trypsin, amylopsin, cholesterin), bacteriotherapy (Coley's fluid, vaccinotherapy, serum of Doyen, streptococcic toxins of Emmerich and Scholl, blastomycetic serum of Wlaeff and Sanfelice, cancroin of Adamkiewicz, nectrianin and antimeristem of Schmidt), röntgenotherapy, radiumtherapy, and fulguration.

Professor A. STICKER and Dr. E. FALKE (Berlin) communicated a paper on

*The Treatment of Inoperable Cancer by Ferments combined with Radium.*

Inoperable cancer, they said, can be ameliorated and sometimes cured by the use of ferments, whose action is increased by a combination with radium. This new method combines the disintegrating and reabsorbing properties of the digestive ferments (e.g., trypsin) with the action of radium. These actions are not only added to but rather multiplied. The best vehicle is charcoal, because it has the greatest absorptive power for the ferments as well as for the emanation of radium. The preparation used by the authors is a combination of charcoal with trypsin—carbenzym plus barium carbonate of radium. In this practical form the dissolution of the albumins under the action of the ferments is continued and prolonged, while the radioactive substances give the highest tension and duration of emanation.

Dr. R. LOURIE (St. Petersburg) read a paper on the Action of Radium, of X Rays, and of Fulguration on the Tumours of Mice, which was followed by a paper on Experimental Investigations into the Origin of Metastases in Cancer by Professor E. OPITZ (Düsseldorf), and another on Early Intervention in the Treatment of Cancer of the Uterus by Mrs. CL. OOLEZKO STROGANOVA (St. Petersburg).

Professor OPITZ, in the discussion which followed the reading of these papers, said that he had seen a little amelioration after fulguration according to Keating-Hart, but then new proliferations began. The use of acetone was painful. He recommended the administration internally of potassium iodide and the local use of calomel as a dusting powder after the wound had been curetted. Then locally there could be observed a reaction combination of iodine and mercury.

Dr. SELLHEIM (Tübingen) showed a series of preparations exhibiting the great danger of ordinary curettage and cauterisation of cancerous wounds.

Dr. BARREIRO (Mexico) showed the utility of diathermia, which was applicable where the lancet was not, and spared the tissues which must be saved. The bones were no obstacle to its use; no part was too hidden, and no passage too narrow where an electrode could not be placed. There was no hæmorrhage, the tissues were sterile, no dissemination of germs or cancerous cells, orientation and the localisation were easy, and recurrences were exceptional if the whole tumour had been influenced.

Dr. RIVIÈRE (Paris) stated that 15 years ago he used the treatment by sparks before it was spoken of as electrocoagulation or fulguration; this fact was proclaimed by him in 1900 at the Congress of Electrical and Physical Therapy held in Paris.

Dr. KADER (Cracow), Dr. STRASSMANN (Berlin), and Professor STICKER also took part in the discussions.

The paper of Dr. MACNAUGHTON JONES (London) was not read owing to the absence of the author.

## FRIDAY, SEPT. 23RD.

### SECOND SESSION.

*Presidents of honour:* Dr. KADER, Dr. MALINS, and Professor MANGIAGALLI (Milan).

Dr. LE FILLIATRE (Paris) demonstrated a Casque Bavette for Laparotomy and a Dilator for the Suprapubic Operation.

Professor BEUTTNER read a paper and demonstrated a new method of Bilateral Ablation of the Adnexa of the Uterus.

Dr. BUMM read a paper on

*The Leading Principles of Cæsarean Section.*

He discussed the advantages and disadvantages of the supra-symphysic section over the classical operation on the fundus of the uterus, and expressed the opinion that in aseptic cases the choice of method is not important, and for feverish women with a septic genital canal neither method is secure, for the danger depends on the kind of infection, decomposition of the liquor amnii by ascending putrefactive germs being less dangerous than the presence of streptococci.

Dr. PESTALOZZA (Rome) read a paper on

*The Cæsarean Operation.*

He was of the opinion that extra- and intra-peritoneal methods of Cæsarean section have each precise indications, the classical operation being always preferable where asepsis is certain. When this is uncertain the extraperitoneal operation should be performed, but in cases of certain infection embryotomy was indicated and no Cæsarean section was safe.

Dr. AMAND ROUTH read a paper on

*Cæsarean Section in Great Britain and Ireland.*

He showed from statistics of all operations performed in the United Kingdom since 1867 how the lessened risk of Cæsarean section had widened its range of usefulness, and considered it in the circumstances of obstruction to labour, uterine hæmorrhage, and constitutional crises.

Dr. E. P. DAVIS (Philadelphia) read a paper on

*Cæsarean Section for Conditions other than Contracted Pelvis.*

Six cases were discussed—2 of central placenta prævia, 1 of inactivity of the uterus, 1 of multiple fibromata, and 2 of toxæmia on the basis of insufficiency of the thyroid gland.

Dr. DÖDERLEIN (Munich) followed with a paper on Hebosteotomy with Extraperitoneal Cæsarean Section.

THIRD SESSION.

*Presidents of honour:* Dr. MARTIN (Berlin), Dr. ROUTH, Dr. ROSNER (Cracow), and Dr. PESTALOZZA (Rome).

Professor OPITZ read a paper on

*The Value and Choice of the Different Methods of Cæsarean Section.*

He said: In aseptic cases the classical Cæsarean section and the suprapubic are equally advantageous, but the secondary infection of the uterine wound cannot be excluded. If infection is possible, a wound in the depth of the pelvis is less dangerous than a wound situated higher in the abdominal cavity. The danger can be diminished by draining through the posterior vaginal cul-de-sac. The opening of the abdominal cavity and the flowing out of the amniotic liquid are of no great importance. Therefore, in making the suprapubic Cæsarean section it is permissible to open the abdominal cavity and then to go between the bladder and the uterus to make its neck more accessible to the incision. By sewing the wound with the bladder and the peritoneum it is placed extraperitoneally. The method of Latzko is the best for the operation if completely extraperitoneal, but it makes a very large wound in the cellular tissue which may be dangerous. Therefore the method of Latzko-Doederlein is to be adopted only in exceptional cases.

Dr. PANKOW (Freiburg) read a paper on Hebosteotomy *v.* Cæsarean Section.

Dr. SELLHEIM read a paper on

*The Modern Methods for the Improvement of the Technic of Cæsarean Section,*

of which the following is a summary. For Cæsarean section, as long as no great haste is demanded, the Pfannenstiel transverse incision is preferable to the median incision, for it allows a better shutting off of the free peritoneal cavity during and after the operation, and further pregnancies can progress without disturbance. In evidently infectious cases with a marked abnormal relationship between child and parturient canal, all operative deliveries, with exception of the reduction in the size of the child, are dangerous. But the risk may be minimised through an improved management of labour. From 46 cases of Cæsarean section performed by different methods Professor Sellheim had lost five mothers and six children. In two patients the extraperitoneal Cæsarean section was repeated and no complications were observed. In general the success of the extraperitoneal Cæsarean section is so great as to raise the question in what degree this operation could take the place of the classical Cæsarean section, of hebosteotomy, and of vaginal Cæsarean section.

Dr. KHOLMOGOROFF (Moscow) read a paper on the

*Different Methods of Cæsarean Section (Classical, Vaginal, and Extraperitoneal).*

The classical method required special precautions and experience; the extraperitoneal method was good for cases where infection was suspected. The vaginal Cæsarean section ought not to be opposed to these operations, but only to operations performed in cases where no delay was possible. This method had all the advantages of the others, which were long, difficult, and more dangerous.

Dr. COVA (Rome) read a paper on Extraperitoneal Cæsarean Section according to the Method of Latzko, which was followed by a paper by Dr. VAN DE VELDE (Haarlem) on

*Hebosteotomy v. Cæsarean Section.*

For cases of moderate contraction he preferred to use hebosteotomy, in other conditions Cæsarean section. In cases of infection the first operation was less dangerous. After hebosteotomy he had observed 13 following labours, and in seven cases had found that the pelvis remained dilated.

Dr. FRANTZ (Cologne) read a paper on Subcutaneous Hebosteotomy and Suprasymphysic Delivery.

Dr. MORAVSKY (Cracow) read a paper on an

*Addition to the Question of the Extraperitoneal Section.*

He described nine cases of Cæsarean extraperitoneal section operated on during one year. The great advantage of this operation was that the abdominal cavity remained intact. This method could be used in cases where the classical Cæsarean section could not be undertaken.

SATURDAY, SEPT. 24TH.

The hour from 9 to 10 A.M. on this day was given up to demonstrations.

Dr. CRÉDÉ-HOERDER (Munich): Anatomy of the External Genital Organs of the New-born. He had found the following differences between the adult and the new-born. In the latter the ligamentum suspensorium clitoridis was very large. The configuration of the corpora cavernosa clitoridis and urethræ was quite different. The corpora were larger than in adults. The funiculi spermatici were enormously large. The ligamenta teretia of new-born boys were very feeble. The septum scroti was enormously developed. The testes were very small. The epididymis and the corpuscles of Morgagni were very large. The bulbus urethræ in the new-born was formed as in an animal. The corpora cavernosa urethræ in the new-born girl were convergent, which was not the case in an adult. The microscopic examination showed that the præputium was very developed and it took up two-thirds of the whole length of the penis.

Dr. MARTIN showed 35 pictures illustrating the topographical anatomy of the genital region of the woman and insisted on the importance of knowing this region, especially in cases of prolapsus of the bladder and of the uterus.

FOURTH SESSION.

*Presidents of honour:* Sir A. R. SIMPSON and Dr. SOOBBOTITCH (Belgrade).

The question which came up for the consideration of the Congress at the session was the Vaginal Route in Obstetrics and Gynæcology.

Dr. MARTIN read a paper on

*The Vaginal Route in Gynæcology.*

The vaginal peritoneal operation, colpotomy, had been essentially improved by the paravaginal incision and Ott's lighting instruments. It had thereby been freed to a considerable extent from the objection of an insufficient way to the operative field and of want of comfortable eye control. Colpotomy was indicated by special groups of displacement and deformity of the uterus, inflammation of tubes and ovaries and peritoneum, by the earliest stages of ectopic gestation and special forms of neoplasmata of the uterus and ovary. It was less serious than laparotomy and gave favourable immediate and remote results. It was not alternative to laparotomy, but answered special indications. Vaginal operations were indicated for those cases where

plastic surgery was necessary for correction of the position of the uterus and the vagina, modification of the hypertrophy of the uterus which was formerly called chronic uteritis, chronic inflammations of the peritoneum of the pelvis and the organs contained therein, and not very hard nor very large peri-uterine adhesions; in early cases of extra-uterine gestation with a sac which had not burst; and after rupture when the shock was over. Tuberculous states were better attacked from above. In cases of collapse the diagnosis could be only presumptive, therefore it was better to operate by abdominal section. Myomata of the uterus and tumours of the ovaries should be operated upon not according to their size but according to their mobility and their connexion with other organs. Neoplasms, the malignity of which was suspected, must be operated on abdominally.

Professor JUNG (Göttingen) read a paper on

*Theses of the Report about Bossi's Method, Metreurysis, and Colpohysterotomy.*

The rapid and forced dilation of the cervix uteri with Bossi's instrument during pregnancy or parturition should be rejected when the cervical canal was not dilated and regular and strong labours had not preceded. Primiparæ ought not to be delivered at all with Bossi's dilator. Also placenta prævia was a strict contra-indication against its use. When multiparæ were in question and the cervical portion was already dilated and drawn upwards, Bossi's instrument, handled by a skilful and well experienced obstetrician, might give good results in single cases. The practitioner, however, ought to be strongly advised against the use of the instrument on account of the ever-threatening danger of deep lacerations of the cervix. In all cases in which the confinement was to be accelerated but not to be brought to an end immediately, also in cases of placenta prævia when the fœtus was alive, metreurysis was the best and safest proceeding. The treatment of placenta prævia by colpohysterotomy was only permissible in the clinic, and even there only in the case of placenta prævia totalis. Also for induction of labour the introduction of a metreurynter into the uterine cavity was the most advisable procedure. In those cases in which the pelvis was normal and the woman had to be delivered immediately, colpohysterotomy should be chosen for treatment in the clinic. The practitioner who was single-handed should in such cases apply metreurysis. Contraction of the pelvis reaching the second and third degree and the child being alive required the abdominal Cæsarean section, supposing the patient was not infected. Should infection exist, then the head of even the living fœtus must be perforated; eventually Porro's operation must be performed.

Dr. FRAENKEL (Breslau) read a paper on

*The Vaginal Incision.*

He proposed to drain the vagina with his instruments and according to his technique, not only in cases of opening abscesses, but also to assist the resorption of inflammatory products in the cellular tissues of the large ligaments. According to his opinion, operative intervention was but rarely indicated for peri uterine inflammations; the vaginal incision was the first and the most efficacious agent in resorptive therapy.

Dr. DUETZMANN (Berlin) read a paper on Vaginal Methods of Operation, which was followed by a paper by Dr. STRASSMANN on the Perfection of the Vaginal Methods of Operation with the Use of the Anterior Flap Incision.

Dr. KOROBKOFF (St. Petersburg) read a paper on

*Ovariotomy through the Vaginal Method during Pregnancy.*

The vaginal method was valuable for the ablation of tumours of the ovaries complicating pregnancy, as the abdominal wall remained intact, which was of particular importance during pregnancy. When using the speculum of Professor Ott it was possible to operate by the vaginal method even on tumours situated above the superior brim, complicating adhesions being no contra-indications to the vaginal method. Posterior colpotomy was to be preferred to anterior, as the pedicle especially, thanks to the lighting of Professor Ott, could always be tied with security. The vaginal method was especially advantageous in the last months of pregnancy because of the possibility of avoiding any lesion of the abdominal wall.

Dr. G. VERBOFF (St. Petersburg) read a paper on

*The Vaginal Route in Cases of Pregnancy Complicated by Cancer of the Uterus.*

It was very easy to separate the pregnant uterus from the neighbouring organs, evidently because the tissues were very loose in the pregnant woman. The size of the pregnant uterus was no obstacle to the removal, because through the route of an anterior incision the uterus could be gradually emptied and removed by "morcellement." If it were possible to operate vaginally on the non-pregnant uterus, in cases of complications of pregnancy by cancer it was also easier, and this operation was to be preferred to the method through the abdominal wall, because here it was especially important to prevent the abdominal cavity from being soiled by the secretion of the cancerous tumour. Therefore it could not be understood why certain authors did not accept this route in the complication of pregnancy by cancer, and did not use the less dangerous way of vaginal extirpation.

Dr. JACOBSON (St. Petersburg) read a paper on

*The Value of Colpotomy in the Treatment of Extra-uterine Gestation.*

The proper treatment of extra-uterine gestation was the removal of the ovum, which led to the cessation of all symptoms. Together with the treatment of abortion the cause must be also treated by conservative and radical operations of the adnexa. The operation of choice was colpotomy, preferably the posterior operation, but under the condition of being acquainted with the technique of lighting. Anterior colpotomy should be used only in tumours situated immoveably in front of the uterus. Colpotomy attained its purpose as well as laparotomy, but with less danger for the patient. The good results of the operation gave the right to operate on every case of extra-uterine gestation. Laparotomy in the early stages of the extra-uterine gestation should be abandoned and preference given to the vaginal methods. Laparotomy was indicated only in cases of later extra-uterine gestation and in some cases of acute hæmorrhage into the abdominal cavity.

Dr. SITZINSKY (St. Petersburg) read a paper on

*The Lighting of the Cavity of the Puerperal Uterus.*

The lighting of the cavity of the puerperal uterus was most complete with the use of Professor Ott's specula in the inclined position of the uterus. The lighting during the treatment of the infected cavity of the puerperal uterus permitted operation with the same facility as in an infected open wound. If the uterus were ruptured the lighting permitted a decision to be made in every case as to the method to be followed.

Dr. KIPARSKY (St. Petersburg) read a paper on the Vaginal Route in the Treatment of the Neoplasms of the Uterus, in which he stated that its advantage in cases of cancer uteri was proved by a large number of recoveries with a minimum of cases of an immediate death and the maximum of lives saved.

FIFTH SESSION.

*Presidents of honour:* Dr. SLAVTCHEFF (Sophie) and Dr. WINTER (Königsberg).

Dr. MARKOVSKY (St. Petersburg) read a paper on

*The Vaginal Route in the Treatment of Lesions of the Adnexa.*

Indications: Proliferation or inflammatory cysts of the ovaries if it were evident that there were no large and solid adhesions with the parietal peritoneum or with the organs situated above the superior brim of the pelvis causing insufficient mobility as a consequence of anatomical and pathological conditions. Colpotomy was the natural operation in the treatment of intraligamentary cysts, and was very easy also in the treatment of the inflammatory lesions of the ovaries and tubes, with serous or purulent contents unilateral or bilateral, with or without adhesions.

Dr. SOBOLEFF (St. Petersburg) read a paper on

*Removal of the Appendix in the Course of the Vaginal Interventions.*

The method of lighting the abdominal cavity enabled an examination of the vermiform appendix in the course of a colpotomy. The removal of the appendix as an accessory operation in the course of colpotomy was quite possible, and gave good results in cases where the appendix and the neighbouring tissues were not infiltrated and could be pulled into the lower pelvis (operation of Professor Ott, April 26th,

1906). The peritoneal intestinal adhesions could be liberated without great difficulty with the aid of Ott's specula.

Dr. FUETH (Cologne) read a paper on

*Vaginal Amputation of the Corpus Uteri.*

In cases of hæmorrhage which could not be cured by usual methods, he believed that the best operation was that of Rieck—i.e., the vaginal amputation of the corpus uteri. The advantages were: the rapidity of the operation, the slight loss of blood, and the certainty of securing the vessels. There was no necessity to remove the cervix, the time of the operation was greatly shortened, and the abdominal cavity did not remain open for any length of time.

Dr. BECKMANN (St. Petersburg) read a paper on

*Metreurysis and Vaginal Cæsarean Section as a Method of Delivery in Eclampsia.*

Last year in the Obookhov Hospital of St. Petersburg he had employed early delivery by means of the vaginal Cæsarean section in cases of eclampsia and had had a mortality of only 12·4 per cent. The operation was performed seven times; it was not dangerous and presented no technical difficulties.

Dr. KROEMER (Greifswald) and Dr. D. OTT (St. Petersburg) communicated a paper on What are the Causes of the Better Results obtained by the Vaginal Method Compared with Abdominal Laparotomy?

A discussion upon the papers followed.

Dr. FALGOWSKI on the basis of 32 unpublished cases believed that the vaginal route was suitable for the treatment of the adnexa. He operated by the vaginal method also in cases of early extra-uterine gestation and even of small intra-ligamentary tumours; the sterilisation with the removal of the tubes was executed easily and was efficacious.

Dr. SELLHEIM preferred Cæsarean section in the majority of adnexal cases, especially if the pelvis was elevated; he used the incision of Pfannenstiel and spinal anæsthesia. To prevent infection, for the provisional isolation of the region of the operation of the abdominal cavity he recommended an aseptic sponge enveloped in a compress and put between two other compresses. If the case was a suspicious one and it was necessary to drain the abdominal cavity, instead of a sponge a bag filled with gauze (like that of Mikulicz) should be employed.

Dr. JAYLE (Paris) was a convinced partisan of laparotomy; he considered that the vaginal route should be reserved only for cases which were not suitable for the high operations as a consequence of some exceptional conditions.

Dr. VAN DE VELDE was against the employment of the instrument of Bossi, the use of which he had discarded. He now used the method of Bonnaire, and if the orifice commenced to tear he preferred colpohysterotomy.

Dr. A. MARTIN believed that such an extended analysis of the question of the vaginal route as had been made by the Congress could not remain without fruitful results.

Dr. MACEIEWSKI (St. Petersburg) was opposed to ventroscopy as a method which might introduce infection, bruise the tissues, and infect the ligatures of the vessels.

Dr. WINTER (Königsberg) read a paper on

*Intra-uterine Intervention in the Infected Puerperal Uterus.*

On the ground of a bacteriological analysis he had come to the following conclusions. If indifferent germs were present the time of delivery might be shortened, but if the bacteria were harmless delivery should be delayed until easy manipulation was possible. If hæmolytic streptococci were found, the best practice was to abstain from every operative intervention and only to try to shorten the delivery until it would be possible to finish it with proper precautions. He believed it to be more prudent to leave the streptococci in an intact tract than to produce wounds or bruises. He hoped that the time would come when by early diagnosis and by the isolation of infectious cases it would be possible to perform an operation even in cases of placental polypi, in septic abortions, and in septic fever during delivery.

Dr. LE FILLIATRE read a paper upon

*The Adhesions of the Epiploon and the Bowels to the Abdominal Wall as a Consequence of Laparotomies for Intervention on the Uterus and its Adnexa.*

The epiploic adhesions, pure or accompanied by intestinal adhesions to the scar of the abdominal wall as a consequence of laparotomies, often passed without being recognised, and were the cause of diagnostic errors, as in three cases observed by himself. These adhesions were causes of very different accidents which might necessitate surgical intervention according to their nature. Some of these cases simulated appendicitis and some resembled salpingitis. It was highly important to take into consideration the epiploic adhesions in all the cases where a patient who had been the subject of a laparotomy presented abdominal troubles simulating appendicitis or an affection of the lower pelvis. Consequently to prevent such complications and to avoid the necessity of a second operation on a patient, he recommended excision of the epiploon partially or totally each time when (after having opened the peritoneum) it was met in the field of operation.

Dr. ABADIE (Oran) read a paper on the Advantages of Uterine Hemisection in Hysterotomy for the Removal of Bilateral Affection of the Adnexa (the operation of J. L. Faure), which was followed by a paper on Histological Investigation of the Prophylactic Methods against Gonorrhœa by Dr. CRÉDÉ-HOERDER.

MONDAY, SEPT. 26TH.

As on Saturday, demonstrations were given from 9 to 10 A.M. on this day.

Professor OPITZ showed: (1) A Uterus with a large Cancer of the Cervix, together with Placenta Prævia, Removed through the Suprapubic Cæsarean Section; (2) a Uterus Removed by Laparotomy after Lacerations of the Cervix due to Bossi's Dilator; (3) Kidneys with Pelvis attacked by Lesions which resembled Tuberculosis under the Microscope, but did not contain Bacilli; and (4) two cases of Cancer of the Bladder (during the operation it was necessary to remove a rather large part of the bladder).

Dr. IVANOFF (Moscow) showed Preparations of the Pelvis exhibiting Dislocation of the Muscular Fibres entering into the Musculature of the Uterus.

Dr. ROSNER showed some instruments.

SIXTH SESSION.

*Presidents of honour:* Dr. JACOBS (Brussels) and Dr. VAN DE VELDE.

The question before the Congress at this session was the Compared Value of Different Methods of Operation in the Treatment of Dislocations and Deviations of the Uterus.

Dr. VAN DE VELDE read a paper on

*The Comparative Value of Various Operative Methods in Retroflexion of the Uterus.*

He stated that operative correction of retroflexion (version) of the uterus should fulfil as completely as possible the following conditions:—1. Simplicity in performance and reduction of the dangers of the operation to a minimum. In cases where it had been impossible beforehand to ascertain (with certainty) the absence of adhesions or other complications, these disorders might be recognised during the operation and the appropriate treatment applied. 2. Restoration as nearly as possible to the normal position. 3. If the trouble which existed before the operation was not sufficiently alleviated the indications and not the operation itself should be blamed. 4. The generative functions should not be interfered with in any way. In the absence of complications the possibility of conception should not differ from the normal. 5. The improved position of the uterus was only fully manifested when no relapse followed subsequent pregnancy and labour. He classified the operations as follows:—1. Operations on the uterus itself. 2. Operations which fastened the body of the uterus in front (vagino-fixation, ventro-fixation, indirect fixation, ventro-fixation of the round ligaments, vagino-fixation of the round ligaments, inguinal fixation of the round ligaments, subperitoneal shortening of the round ligaments). 3. Operations advised to fasten the cervix backwards. 4. Operations on the adjacent parts only. The attempts to obliterate the pouch of Douglas deserved full recognition, and plastic operations on the perineum and vagina were in many cases supplementary and necessary operations. As the results of present experience he recommended inguinal fixation in cases devoid of complications; indirect ventro-fixation or a combined (indirect and direct) inferior vagino-fixation in women who may become pregnant; and direct vagino-fixation or ventro-fixation for sterile women. The periodical Gynæcological Congress could appropriately organise this work. The Congress held in St. Petersburg might decide to constitute an international commission of five members who should be authorised to distribute the work amongst themselves, adding to their number, if necessary; a task which involved

the observation and publication of all notable cases; collecting and methodically arranging materials; instituting a fruitful discussion and, as soon as sufficient material was collected, making a communication thereof at a session of the next congress.

Dr. ILJIN (St. Petersburg) read a paper on

*Section of the Perineum in the Median Line during Labour.*

The different contemporaneous methods of protection of the perineum during labour could not prevent rupture. A large number of ruptures even if sewed up did not give a complete recovery because the tissues were lacerated and contused. The only method of escaping such lesions of the muscles was perineotomy. Whilst sewing together the lips of the wound after perineotomy it was necessary to take into consideration the normal anatomical relations of all the tissues, especially of the muscles. Therefore the separated muscles should be united by separate sutures.

Dr. EBERLIN (Moscow) read a paper on

*The Value of Alexander's Operation in the Treatment of the Retrodeviations of the Uterus according to 130 Clinical Observations.*

Of all the practical methods of treatment of mobile retrodeviations of the uterus the most rational was the operation of Alexander, because it was safe, its results were stable, and the clinical effect was good. *Conditio sine quâ non* of the success of this operation and of its immediate and remote effects was good technique, which consisted especially in isolating the round ligament from the fascia transversa and in shortening it sufficiently. The points against the operation, the difficulty of technique and the possibility of an inguinal hernia following, diminished its value but little.

Dr. SCHAABACK (St. Petersburg) read a paper on

*The Immediate and Ultimate Results of the Operative Treatment of the Prolapsus of the Uterus.*

The reconstitution of the floor of the pelvis by an extended colpoperineorrhaphy gave the most permanent results in all degrees of prolapsus of the uterus and vagina. It was also the safest operation because it gave a mortality of only 0·2 per cent. compared with a mortality of from 3 to 4 per cent. from other operations, and was free from post-operative complications which so often followed other methods. To prevent a future rupture of the perineum in the next labour (55 per cent.) prophylactic perineotomy according to Professor Ott must be made.

Dr. JACOBSON read a paper on the Restitution of the Pelvic Floor as an Operative Method in the Cure of the Prolapsus Ani, and was followed by Dr. DUETZMANN (Berlin) with a paper on the Treatment of Retroflexio Uteri by Vagino-vesico-fixation and Consecutive Labour.

Dr. ALEXANDROFF (Smolensk) read a paper on

*The Shortening of the Basis of the Broad Ligaments as a Method of Operation for Retro-versio-flexion of the Uterus.*

The broad ligaments of the uterus with the muscular elements placed in the basis of the ligaments had an important value in retaining the uterus and played an independent part. Whilst shortening and sewing together the cardinal ligaments the uterus was put up to the normal height, and whilst pushing the neck of the uterus backwards in the direction of the sacrum a normal position was given.

A discussion upon the points brought forward in the various papers followed.

Dr. FALGOVSKI insisted on the importance of a systematic study of the operations for prolapsus with special attention to the lesions of the bladder (cystoscopy). The operation of Alexander Adams had no influence on the bladder; it did not produce herniæ, and was therefore preferable to other operations. It could be applied even to adhesions after they had been removed by a vaginal incision.

Dr. SELLHEIM believed that retroflexion of the uterus seldom required a particular treatment; prevention was more important.

Dr. FUETH considered the operation for retroflexion necessary only if there were complaints. Patients should not be told that they had this anomaly as it was likely to produce a false conception of their disease.

Dr. DUETZMANN did not agree with the objections to the vagino-vesico-fixation. He had operated on more than 600 cases and had obtained equally good immediate as well as remote results. In 29 cases after this operation he observed labour without complications.

Dr. MACIEWSKI disagreed with the views of Dr. Iljin.

Professor OPITZ supported the proposition of Dr. Van de Velde to form a commission for the analysis of the question of the treatment of the abnormal position of the uterus, and spoke on the question of prolapsus and its anatomical causes.

Dr. KNORRE, Dr. SCHAABACK, and Dr. VAN DE VELDE also took part in the discussion.

SEVENTH SESSION.

*President of honour:* Dr. WETHERILL (Denver, Colorado).

Dr. JAWORSKI (Warsaw) read a paper on Metrorrhagia of Syphilitic Origin; Pains in the Uterus. He had observed eight cases of obstinate hæmorrhage which did not yield to any treatment, and he considered the cause to be sclerosis of the vessels of the uterus.

Dr. J. W. BALLANTYNE (Edinburgh) read a paper on Eclampsia and its Management: a Comparison of Methods. The general result of his observations had been to strengthen his belief in the efficacy of medical and minor surgical means of treatment applied as far as possible before the supervention of labour.

Dr. JAYLE (Paris) read a paper on Vulvar Sclerosis and Kraurosis Vulvæ. The most common cause of kraurosis was ovarian castration. In women who had undergone no operation, he believed that the disease was due to some atrophic lesion of the ovaries. Removal of the ovaries was not sufficient in itself to cause kraurosis.

A paper by Dr. RINGLEB (Berlin, Charlottenburg) on the Progress of Cystoscopy, was followed by one by Dr. RADWANSKA (Cracow) on the Treatment of Vaginitis and Endometritis.

Dr. LE FILLIATRE read a paper on the Advantages of Spinal Anæsthesia. He preferred, he said, to make the puncture between the last lumbar and the first sacral vertebræ; he injected 0·01–0·05 of cocaine—i.e., 0·5–2·5 c.c. of the 2 per cent. solution, with the patient in a particular position. He had used the method more than 2000 times in eight years.

Papers followed by Dr. ABADIE, on Rachianæsthesia; Dr. AARONS (London), on the Use of Pituitary Extract in Obstetrics and Gynæcology; Dr. RIVIÈRE, on the Value of Physicotherapy in Gynæcology; Dr. MEIER (Berlin), on Hydatid Cysts; and Mrs. ABADIE (in collaboration with Dr. ABADIE), on the Importance of Wassermann's Reaction in the Diagnosis of Gynæcological Affections.

TUESDAY, SEPT. 27TH.

From 9 to 10 A.M. demonstrations were given.

Dr. KOPTEFF (St. Petersburg) gave a Demonstration of a Metreurynter and of the Method of its Application.

The following instruments, microscopic preparations, &c., were shown:—Dr. VON SCHRENCK (St. Petersburg): A Pessary for the treatment of Prolapsus Uteri. The pessary is introduced bent in two directions. Dr. BONDY (Tübingen): Microscopic Preparations of a case of Actinomycosis. Dr. SITZINSKY: Three Pieces of the Wall of the Uterus in Metritis Desiccans. Dr. KOOZMIN (Saratov): Photographs of Four Cases of Extra-uterine Gestation operated on by him in the gynæcological department of the Zemstvo Hospital of the Saratov province. Dr. GAUSS (Freiburg): An Instrument for the Compression of the Aorta.

EIGHTH SESSION.

*President of honour:* Dr. ABADIE.

Dr. FRAENKEL (Breslau) described a new series of experiments which confirmed his opinion that the corpus luteum is an organ which regulates the cyclic modifications of the uterus.

Dr. OKINTCHITZ (St. Petersburg) read a paper entitled "Which Elements of the Cellular Tissue of the Ovary can be considered as Glandular Tissue?" The cells of the "cumulus oöphorus" should be regarded as glandular tissue. They fulfilled a complicated chemical function by bringing the nutritive matter to the cell of the ovule and by eliminating the products of metabolism.

A paper by Dr. BELOFF (Kharkoff) on the Rôle of the Secretion of the Yellow Bodies (Corpora Lutea) of the Ovaries was followed by one by Dr. SCHLANK (Cracow) on Clinical and Experimental Investigations on the Care of the Umbilical Cord in the New-born. He had used the method

of Gauss. He cut the cord between two forceps, putting a special pair of pincers quite near the skin, and severing the umbilical cord, put on an aseptic bandage. The results were excellent.

Dr. NEUGEBAUER (Warsaw) read a paper entitled, "A Contribution to the Study of the Gemellar Isochronic Heterotopic Gestation. This was followed by a paper by Dr. FALGOVSKI (Posen) on Acute Relaxation of the Uterus during Narcosis by Inhalation. In four cases he had seen a sudden relaxation of the non-gravid uterus during profound narcosis. He considered that it was due to the paralysis of the centres which regulated the tension of the muscular tissue of the uterus.

Dr. KAKOOSHKIN (St. Petersburg), in a paper on the Septum Vaginæ from the Anatomical and Clinical Points of View, said that median sagittal septum vaginæ was not a rare complication. The septum was very rich in blood-vessels which had sometimes a cavernous form, and were the cause of hæmatomata and profuse hæmorrhages in pregnancy. The septum should be treated like a neoplasm: it should be totally extirpated.

Dr. IVANOFF (Moscow) read a paper on the Construction of the Muscular Layer of the Broad Ligaments of the Uterus.

In the discussion which followed Dr. STRASSMANN considered that the paralytic state of the uterus, according to Dr. Falgovski, was not proved.

NINTH SESSION.

*President of honour:* Dr. SELLHEIM.

Dr. DAVIDSON (Kieff) read a paper entitled "A Contribution to the Study of the Operative Treatment of Uterine Myomata." This was followed by a paper by Dr. SNEGIREFF (Moscow) on Electro-cardiographic Studies in Gynæcology.

Dr. KAKOOSHKIN read a paper on Experimental Observations on the Perforability of the Uterine Wall. He had studied the resistance of the uterine wall to perforation by a sound and had found that the force necessary for this purpose was 2088 grammes. In 3 per cent. of the cases where the peritoneum was very strong it was necessary, in order to make a complete perforation, to add a complementary force of 1285 grammes. The perforability of the uterine horns was greater than that of the fundus. The uterus was more easily perforated in nulliparæ than in multiparæ.

Dr. ABADIE read a paper on the Treatment of Congenital Absence of the Vagina by Transplantation of the Bowel. He described a case and analysed the advantages and the features of his method compared with those of Baldwin. Intestinal transplantation gave better results than the method of Thiersch, but was more difficult. The choice depended not only on the physician but also on the patient, to whom the condition should be explained.

A paper by Dr. MODLINSKY (Moscow) on the Sacral Route in Gynæcology and Surgery was followed by the last paper of the Congress by Dr. MONTOYNONT (Madagascar), the subject being Gynæcology in Madagascar.

It was decided that the next International Congress should be held in Berlin in September, 1912, when the question of the Comparative Value of Different Methods in the Treatment of Dislocations and Deviations of the Uterus will be discussed. The Proceedings of the Congress will appear in due course.

## THE CHOLERA EPIDEMIC.

(BY THE BRITISH DELEGATE ON THE CONSTANTINOPLE BOARD OF HEALTH.)

DURING the past summer the Russian Empire has been, for the seventh year in succession, the scene of a severe epidemic of cholera, and the disease has spread—no doubt from that country—to Germany, Austria, Hungary, Italy, Roumania, Turkey in Europe, and Asia Minor. The present, indeed, would appear to be the most widely spread epidemic of cholera that has been seen since the years 1892–1895. It will be useful to follow in some details the course the disease has followed during the past few months.

*Cholera in Russia.*

It will be recalled that (as described in my letter which appeared in THE LANCET of March 26th last, p. 891) cholera had, so far as was known, ceased to be epidemic in all parts of Russia some time during the month of January. The last known case seems to have occurred on Jan. 17th (29th). For nearly three months no cases or deaths from the disease were reported from Russia. In April, however, cholera reappeared in the Ekaterinoslav government (which borders the Sea of Azov), and a little later it was reported from the Vitebsk government (bordering on Polish Russia). In the former 38 cases with 7 deaths occurred between April 4th and 21st. The following are the weekly returns for the whole of Russia, beginning with April 18th (this and all dates subsequently mentioned in connexion with the Russian epidemic are according to the Old Style, unless otherwise stated):—

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Week ending | April | 24th | ... | 21 | cases, | 4 | deaths. |
| ,, | ,, | May | 1st | ... | 48 | ,, | 17 | ,, |
| ,, | ,, | ,, | 8th | ... | 74 | ,, | 42 | ,, |
| ,, | ,, | ,, | 15th | ... | 160 | ,, | 65 | ,, |
| ,, | ,, | ,, | 22nd | ... | 317 | ,, | 143 | ,, |
| ,, | ,, | ,, | 29th | ... | 840 | ,, | 305 | ,, |
| ,, | ,, | June | 5th | ... | 2,304 | ,, | 830 | ,, |
| ,, | ,, | ,, | 12th | ... | 4 093 | ,, | 1,436 | ,, |
| ,, | ,, | ,, | 19th | ... | 3,322 | ,, | 1,611 | ,, |
| ,, | ,, | ,, | 26th | ... | 4 636 | ,, | 1,237 | ,, |
| ,, | ,, | July | 3rd | ... | 9.378 | ,, | 4,211 | ,, |
| ,, | ,, | ,, | 10th | ... | 18,316 | ,, | 8,310 | ,, |
| ,, | ,, | ,, | 17th | ... | 18,376 | ,, | 8 327 | ,, |
| ,, | ,, | ,, | 24th | ... | 26,625 | ,, | 11,541 | ,, |
| ,, | ,, | ,, | 31st | ... | 30.610 | ,, | 13,674 | ,, |
| ,, | ,, | Aug. | 7th | ... | 19 688 | ,, | 9,659 | ,, |
| ,, | ,, | ,, | 14th | ... | 12,510 | ,, | 6,376 | ,, |

The above figures are the latest "corrected" figures available here. The following are "uncorrected" figures, and will certainly be increased when the exact numbers are later made known:—

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Week ending | August | 21st | ... | 9343 | cases, | 4405 | deaths. |
| ,, | ,, | ,, | 28th | ... | 7559 | ,, | 3557 | ,, |
| ,, | ,, | Sept. | 4th | ... | 4412 | ,, | 2071 | ,, |

The totals for the whole country from the beginning of this year's epidemic down to August 14th (27th) are officially put at 154,445 cases and 74,723 deaths. This is, therefore, as stated above, by far the most severe cholera epidemic that has occurred in Russia since the early "nineties" of last century. It will be of interest to give a brief summary of the behaviour of cholera in Russia and adjoining countries during the past few years.

In 1903 Russia was apparently free from the disease. In 1904 cholera caused a somewhat severe epidemic in the Caucasus, and spread to some extent along the Volga and its branches, as far as Ufa, Nijni Novgorod, and Yaroslavl. In 1905 the disease broke out in the Polish provinces in the autumn and continued to prevail until the early months of 1906. Only 445 cases and 220 deaths were registered. From February, 1906, to July, 1907, there was a cholera-free interval. A widespread but not very severe epidemic then followed, beginning on the Volga and extending to most parts of European and Asiatic Russia; nearly 12,000 cases and 6000 deaths were reported. The disease also crossed the frontiers of Asiatic Turkey and Persia. In 1908 the disease reappeared in the Volga Valley in July, and again spread widely in all parts of the Empire; the infection again invaded Persia, and that year's pilgrimage to the Hedjaz suffered severely from the disease. In 1909, with only a very brief interval, cholera continued to prevail in Russia; during the year over 20,000 cases and over 9000 deaths were recorded. The disease also spread into Holland and East Prussia.

Returning to the present outbreak from this very hurried summary of the past, it will be observed that this year's epidemic reached its highest point in the week ending July 31st (August 13th), when as many as 30,610 cases and 13,674 deaths were registered. Since then there has been a rapid decline, but the infection is still active and still widely spread.

The course of the epidemic seems to have been as follows. In April the disease was present only in the governments of Ekaterinoslav, Vitebsk, and Baku, and an isolated case had occurred in Moscow. For St. Petersburg the published evidence is very conflicting. Suspicious cases occurred there during January and February. From April 11th to 24th as many as 52 suspicious cases were seen and several more in

the following week and throughout May. But the beginning of this year's epidemic there is put down to June 7th. In May cholera had appeared in the south-central governments of Kharkof, Mogilef, Kief, Poltava, Taurida, Tchernigof, Kherson, Voronezh, Tambof, Minsk, and the Don Territory, and in the provinces of the Kuban and the Terek in the Caucasus. The towns of Kertch, Odessa, and Rostof-on-Don were also invaded in that month. In June and July nearly all the remaining European governments were infected; the disease had spread to the northerly governments of Archangel, Vologda, Viatka, and Perm, to the Caucasian governments of Daghestan, Stavropol, Kars, Erivan, Tiflis, Elizavetpol, and Kutais; isolated cases had occurred in Finland and in the ports of Revel and Riga; and in these months or early in August cholera had been reported from the Central Asiatic Provinces of Transcaspia, Syr Daria, Akmolinsk, Uralsk, and Turgai, and from the governments of Tomsk and Tobolsk in Siberia.

The intensity of the epidemic varied, of course, widely in different parts of the country. The provinces from which the highest figures have been received (i.e., the highest absolute figures; I am unable at this moment to give the figures in proportion to the population) have been the following:—

| | | |
|---|---|---|
| Kuban province ... ... | 21,849 cases, | 14,072 deaths. |
| Don Territory ... ... ... | 19,538 ,, | 9,031 ,, |
| Ekaterinoslav government | 15,406 ,, | 6,964 ,, |
| Voronezh ,, ... | 7,973 ,, | 3,403 ,, |
| Samara ,, ... | 7,330 ,, | 3,277 ,, |
| Kherson ,, ... | 7,016 ,, | 2,965 ,, |
| Stavropol ,, ... | 5,457 ,, | 2,741 ,, |
| Taurida ,, ... | 4,145 ,, | 2,055 ,, |
| Saratof ,, ... | 4,049 ,, | 1,575 ,, |
| Kief ,, ... | 3,978 ,, | 1,474 ,, |
| Kharkof ,, ... | 3,938 ,, | 1,709 ,, |
| Terek province ... ... | 3,871 ,, | 1,643 ,, |
| Kursk government ... ... | 3,595 ,, | 1,570 ,, |
| Kostroma ,, ... ... | 3,325 ,, | 1,561 ,, |
| Poltava ,, ... ... | 2,942 ,, | 1,168 ,, |
| Kazan ,, ... ... | 2,888 ,, | 1,303 ,, |
| Tambof ,, ... ... | 2,843 ,, | 1,371 ,, |
| Simbirsk ,, ... ... | 2,464 ,, | 1,055 ,, |

The figures in the above table represent in each instance the total cases and deaths reported down to the week ending August 14th (27th), the latest "corrected" figures available. It will be seen that the epidemic has been most active in the southern provinces of European Russia, in the valley of the Volga, and in the northern Caucasus. At the other end of the scale, only single cases of cholera have been reported from the northerly governments of Archangel, Olonetz, and Pskof; in Finland but two cases were reported (respectively from Kuopio and Nyslott); in the port of Riga only 2 cases with 1 death occurred, and in that of Revel there was but 1 case of the disease. The figures for Central Asiatic Russia and Siberia may be given separately as follows:—

| | | |
|---|---|---|
| Transcaspia ... ... ... ... | 84 cases, | 52 deaths. |
| Syr Daria province ... ... | 46 ,, | 25 ,, |
| Uralsk ,, ... ... | 33 ,, | 13 ,, |
| Turgai ,, ... ... | 85 ,, | 43 ,, |
| Akmolinsk ,, ... ... | 245 ,, | 144 ,, |
| Tobo'sk government ... ... | 86 ,, | 40 ,, |
| Tomsk ,, ... ... | 32 ,, | 6 ,, |

### *Cholera in Germany.*

The only appearance of cholera in Germany during the present year seems to have been the occurrence of two cases of the disease in Spandau, near Berlin. One occurred on August 25th, the other on August 27th. The latter died in hospital. Several other suspicious cases were seen, but the bacteriological evidence was always found to be negative. On the other hand, on August 31st and on Sept. 1st, 2nd, and 6th cholera-resembling bacilli were found in the intestinal contents of four of the "contacts" who had been isolated in the hospital at Spandau.

### *Cholera in Austria.*

On June 21st it was reported that a fatal case of suspected cholera had occurred at Podvolokziska, on the frontier of Galicia, in a person who had arrived from Rostof on Don. On the 25th of the month the appearance of cholera on the Galician frontier was officially confirmed from Vienna, without further details. Nothing further was heard of cholera in Austria until August 26th, when 2 suspicious cases were reported from Vienna itself; 1 had been isolated on the 23rd and the other on the 24th; 1 died. In both apparently there was bacteriological evidence that the disease was cholera. The source of the infection was not known. Between August 23rd and Sept. 17th, 7 cases of the disease with 2 deaths occurred in Vienna. The latest bulletin states that between Sept. 18th and 24th there were 2 cases of cholera in Vienna and 1 at Brünn, making a total from the beginning of 9 cases in Vienna and 1 at Brünn, with 3 deaths out of the 10 cases.

### *Cholera in Hungary.*

On Sept. 14th it was officially made known here that the following 5 cases of cholera had occurred in various parts of Hungary. On August 28th a woman had fallen ill on the tug *Regensburg*, on the journey from Vienna to Poszony; she died on the 31st. On August 26th a man had died from cholera at Mohacz. On the 30th a woman died at Voercesmarton. On Sept. 6th a sailor died at Goenyoe. Finally, on the 7th a man died from the disease at Nagybacs. All these places are situated along the banks of the Danube, and it was officially stated that no connexion could be traced between the different cases. On Sept. 19th it was reported that in addition to the above 5 cases 16 others had occurred in Hungary down to the 17th. Finally, between Sept. 17th and 24th as many as 49 cases with 23 deaths were registered.

### *Cholera in Italy.*

On August 18th news was received here of the appearance of cholera in the Italian province of Bari; the first telegram stated that 30 cases with 20 deaths had already occurred. The next day's telegram stated that 26 fresh cases and 22 deaths had been recorded on the 18th. It was at first believed that the infection had been imported by a batch of Russian passengers who had arrived at Bari on August 1st, after stopping at Trani; Bari itself was not at first infected, but Trani was, as also the ports of Barletta, Bisceglie, and Margherita di Savoia. It has not as yet been made clear whether the above-mentioned Russian passengers were in truth the means of introducing the infection to the country. However introduced it soon spread to the province of Foggia. Down to August 22nd 125 certain cases, 6 suspicious cases, and 58 deaths had been registered in the province of Bari, and 59 certain cases with 32 deaths in that of Foggia. On the 22nd there were 29 cases and 25 deaths in the two provinces; on the 23rd 18 cases and 18 deaths; on the 24th 17 cases with 15 deaths; on the 25th 26 cases and 14 deaths, and on the 26th 29 cases and 18 deaths. The subsequent bulletins have been imperfect and irregularly received. It appears, however, that between August 26th and Sept. 20th there were 93 cases and 66 deaths at Barletta, 60 cases and 22 deaths at Molfetta, 49 cases and 28 deaths at Trinitapoli, 29 cases and 14 deaths at Cerignola, 20 cases and 11 deaths at Andria, 19 cases and 19 deaths at Trani, 21 cases and 18 deaths at Margherita di Savoia, 14 cases and 8 deaths at San Ferdinando, 5 cases and 5 deaths at Spinazzola, 4 cases and 3 deaths at Canosa, 2 cases at Bitanto, 3 cases and 1 death at Ortanova, and 1 case and 1 death at Corato.

All the above places are situated on the south-east shores of Italy. More recently cholera has appeared on the opposite shores—at Naples. The information about the outbreak there is conflicting. As early as August 20th it was reported from Rome that, according to rumour, 4 suspicious cases had occurred in Rome and 1 at Naples, but these rumours were not confirmed. In the middle of September it was persistently reported that the disease was epidemic in Naples, but the existence of the disease was equally persistently denied by the Italian authorities. On Sept. 17th the Italian Ministry for Foreign Affairs issued an official bulletin declaring that no case of cholera had been seen in Naples to that date, that the mortality of the town was below the average, that there were several cases of gastro-enteritis in the town but they were few in number and in no way suspicious, that in some of them only coli bacilli were found, but that in some others a cholera-resembling bacillus had been found, which, however, did not agglutinate in a dilution of 1 in 40 or 1 in 50, and that consequently all suspicion of the existence of cholera could be put aside. In spite of this, however, some Italian papers continued to publish cholera bulletins for Naples, declaring that some 10, 15, or 20 cases were occurring there daily. The

authorities continued to deny that cholera existed, though the Turkish, American, Spanish, and other Consuls were delivering "foul" bills of health. Finally, at the end of September it was officially declared that 2 cases of cholera and 1 death had occurred in Naples.

*Cholera in Bulgaria.*

Up to the present the only mention of cholera in Bulgaria has been the report of a death on Sept. 8th from what was believed to be the disease on board a Hungarian ship at Samovit, a Bulgarian port on the Danube.

*Cholera in Roumania.*

As in Hungary and Bulgaria, so in Roumania, cholera seems to have been mainly confined to the valley of the Danube. Only very few cases have occurred. On Sept. 7th there was a (suspicious) death of a woman at Galatz, and on the 17th a suspicious case at Tchernavoda, 64 kilometres from Kustendje; but in both these cases the bacteriological evidence was negative. On the 19th a suspicious case occurred at Corabia; on the 13th and 19th two suspicious cases were seen at Braila, and one of these was confirmed by the results of bacteriological investigations. Finally at Galatz a guard on the landing-stage of the Italian line of steamers died from cholera on Sept. 12th, and here also there was bacteriological confirmation of the nature of the disease.

*Cholera in Asiatic Turkey.*

With cholera prevalent along the Russian shores of the Black Sea, in the ports of Sevastopol, Odessa, Taganrog, Theodosia, Nikolaiefsk, Kertch, Poti, and Batum, it is not surprising that the infection has spread to the parts of Asia Minor adjoining Russian territory. Since the middle of July several imported cases of the disease have been seen on steamers or sailing ships arriving from Russian ports at Trebizond, Surmenè (close to the Turko-Russian frontier), Sinope, Kavak (at the entrance of the Bosphorus), and other ports. In the town of Trebizond the earliest cases were seen on Sept. 16th, when 6 cases with 2 deaths were recorded in four different houses. The disease soon spread here; on the 18th there were 6 cases among the reservists newly called to the colours, and on the 21st there were 12 cases in the local prison. The epidemic has since prevailed in the town, among the reservists, and in the prison, and down to Sept. 25th there had been in all 127 (registered) cases and 64 deaths. Of the cases 40 had occurred in the prison.

The infection appears to have passed the land frontier between Russia and Turkey towards the end of July; on the 20th of that month 2 sudden deaths occurred in a batch of 210 persons crossing the frontier at Keutek. It was not, however, until a month later that the disease spread in the neighbouring *vilayet* of Erzerum. On August 22nd 3 cases and 2 deaths were recorded in the village of Vekil Khan, three days' journey from Erzerum, and 2 suspicious cases in Erzerum itself. In the week ending August 26th 21 cases and 13 deaths had been recorded in the *vilayet;* in the week ending Sept. 2nd there were 18 cases and 26 deaths; in that ending Sept. 9th 13 cases and 6 deaths; in that ending Sept. 16th 48 cases and 30 deaths; and in that ending Sept. 23rd 224 cases and 138 deaths. In the last two bulletins the figures relate to the *vilayets* of Erzerum and Van together. In the last bulletin the names of 23 villages are included in the list; that most severely affected was the village of Nardjan, where 130 cases of cholera with 80 deaths had occurred.

The port of Zunguldak, on the Black Sea—important as being the port for the large coal mines of Eregli (Heraclia)—has recently become infected. Since Sept. 28th 10 cases have occurred there among arrivals from Constantinople and inhabitants of the port.

Mention may also be made of a suspicious death at Basra, near the head of the Persian Gulf, but there is as yet no confirmation of the belief that this was a case of cholera.

*Cholera in Constantinople.*

Apart from rumours and unconfirmed cases, the first case of undoubted cholera in this city (confirmed bacteriologically) was declared on Sept. 19th; the illness had apparently begun on the 13th and the patient (a woman) died on the 17th. This case occurred in the low-lying and specially insanitary quarter of Haskeui, near the tip of the Golden Horn. Down to Oct. 4th there have been in all 69 cases with 34 deaths. The principal "foyers" of the disease have been at Haskeui, and in the equally low-lying and insanitary quarters of Cassim Pasha and Fundukli. The cases have, however, been very widely scattered through all, or a greater part of, this large city, which, with its suburbs, spreads from the Marmara to the Black Sea, and includes the Asiatic shores of the Bosphorus and (for some distance) of the Marmara. From three to seven cases are still being reported daily, and it may be suspected that slight cases occur which do not come to the knowledge of the authorities. It may be noted, however, that the total mortality in the city during the past few weeks has not shown any marked tendency to rise.

*Cholera in Persia.*

Early in August cholera appeared in the Russian port of Astara on the Caspian Sea, but it was not till the middle of the month that the Persian port of Astara became infected. At Ardebil the disease broke out in July and continued to prevail through August; the returns from this town have been very imperfect, but between August 1st and 10th there were 66 cases and 29 deaths among its inhabitants, who number about 30,000. In July the governor of Ardebil reported that cholera existed at Hassan Barough, Niase, and Nir, on the Ardebil-Tabriz road; on July 19th it was reported from Dare-Djaz and Kelat-i-Nadiri in the province of Khorassan. On August 15th cholera was present in Sorab, a town of 10,000 inhabitants on the Ardebil-Tabriz road, and for some time from 10 to 15 cases occurred there daily. The disease was also reported from Nedjan and Velazguerd, near Ardebil, and from Djounta, near Sorab. Until later and fuller reports are received it is impossible to know exactly the extent of Persian territory invaded by the disease, or the intensity of the epidemic in different portions of that territory.

Constantinople, Oct. 5th.

## THE QUATERCENTENARY OF JOANNES CAIUS.

ON Thursday, Oct. 6th, the quatercentenary of the birth of John Caius was celebrated at Gonville and Caius College, Cambridge, of which College he was the second and most munificent founder. The occasion was made largely a medical one, and the justification for this was abundant. Although the University of Cambridge has always kept before her as her ideal a broad academic training rather than a professional equipment, and although this is distinctly the ideal of those at present in authority over Gonville and Caius, yet the second founder of the college was a great physician and president also of a great medical corporation. John Caius in his day was an embodiment of the widest learning as well as an exponent of professional wisdom; he was a fine scholar and had, indeed, once been a professor of Greek; but it was as a court physician that he made the large fortune which enabled him to re-establish the ancient Gonville Hall on lordly lines, and to incorporate with it his new college of Caius. Caius was, moreover, not only President of the Royal College of Physicians of London, but was at one time physician to St. Bartholomew's Hospital, residing within the precincts of the hospital; it was therefore particularly fitting that to the commemoration of his 400th birthday the Master and authorities of his college should invite to take part in the proceedings the official heads of the medical profession. Science in general, indeed, as well as that of medicine, was well represented at the commemoration, as is sufficiently shown by enumerating some of the distinguished guests who were present at Cambridge on the occasion: Professor Sir Clifford Allbutt, F.R.S. (Regius Professor of Physic in the University of Cambridge), Sir W. Allchin, Sir T. Barlow, F.R.S. (President of the Royal College of Physicians of London), Rev. Dr. Bonney, F.R.S. (President of the British Association), Dr. J. B. Bradbury (Downing Professor of Medicine in the University of Cambridge), Mr. H. T. Butlin (President of the Royal College of Surgeons of England), Sir Francis Champneys (chairman of the Central Midwives Board), Sir William Church, Sir Anderson Critchett, Professor Howard Marsh (Master of Downing College and Professor of Surgery in the University of Cambridge), the Bishop of Ely, Dr. W. Ewart, Dr. J. Kingston Fowler, Sir A. Geikie

(President of the Royal Society), Dr. F. de Havilland Hall, Professor Jackson, O.M., F.B.A. (Regius Professor of Greek in the University of Cambridge), Dr. F. G. Kenyon, F.B.A. (Director of the British Museum), Sir Joseph Larmor (secretary of the Royal Society), Dr. P. W. Latham, Dr. E. Liveing, Dr. Norman Moore (senior physician to St. Bartholomew's Hospital), Dr. J. A. Ormerod, Professor W. Osler, F.R.S. (Regius Professor of Medicine in the University of Oxford), Professor W. Ridgeway, F.B.A. (Disney Professor of Archæology), Dr. Sandys, F.B.A. (Public Orator), and the Vice-Chancellor of Cambridge University (Dr. R. F. Scott, the Master of St. John's College).

The proceedings commenced with a service in the Caius Chapel, at which the Rev. Dr. SWETE, Regius Professor of Divinity in the University of Cambridge and Fellow of the College, delivered an excellent address on the fruitfulness of an alliance between scholarship and medicine as exemplified in the persons of St. Luke and John Caius. Following upon the service came the commemoration banquet, at which 162 persons sat down in hall, under the presidency of the Rev. E. S. Roberts, Master of the College, who was supported by the Bishop of Ely (Dr. F. H. Chase, formerly President of Queens' College), the Vice-Chancellor, the Master of Corpus, the Master of Magdalene, the Master of Sydney-Sussex, the Public Orator of the University, and the Mayor of Cambridge. The rest of those present were mainly past and present members of the College, among whom were a large proportion of Doctors of Medicine in the University. After dinner the grace and anthem composed by Dr. Charles Wood, Mus. Doc., and a Fellow of the College, was rendered by the choir from the new gallery of the dining-hall, to which ladies were admitted to hear the speeches.

The MASTER having proposed the loyal toasts, Dr. J. VENN, the President of the College, delivered an eloquent address to the memory of John Caius. Speaking without notes and seldom pausing for word or phrase, Dr. Venn told the moving story of Caius' career in a manner which must have left its imprint on all those who heard him. He described the boundless generosity of the man, his courage in adversity, his unceasing intention to benefit those who, urged by private feelings or by political and religious motives, rebelled within the walls of the college which he had founded against the rules of the man to whom they owed everything.

The *Carmen Caianum* was then sung by the choir, after which the MASTER proposed the health of "The Guests." He took the toast out of its usual order in signification of the fact that those with whose names he coupled it were present at a commemoration banquet to John Caius in circumstances of particular aptness, for Sir Thomas Barlow was President of the College where Caius had once presided, and Dr. Norman Moore was senior physician to the hospital where Caius had once lived and worked. Sir THOMAS BARLOW, in a brief reply, alluded in terms that were very acceptable to all his hearers to the theory of training which the University of Cambridge had set before herself in her desire to abate none of her industry in respect of the old learning, while resolving also to keep abreast with the new learning. Dr. NORMAN MOORE, in an admirable speech, reminded the audience that Caius was the first of three great founders of homes of learning, all of whom were members of the medical profession, the other two being John Radcliffe, whose devises to Oxford led to the foundation of the Radcliffe Library, the Radcliffe Fellowships, and the Radcliffe Infirmary, and Sir Hans Sloane, whose bequest of his splendid collections to the nation in return for a moderate sum of money was the origin of the British Museum. Sir ARCHIBALD GEIKIE then proposed prosperity to the University of Cambridge, whose services to science he as President of the Royal Society was happy to acknowledge, and this toast was fitly coupled, not only with the name of the Vice-Chancellor of the University, but with that of Professor Henry Jackson, the Regius Professor of Greek. Here, again, the reply was invited from a particularly appropriate person, seeing that the feast was in honour of Caius, for there is no doubt, not only from known historical facts, but also from the evidence of manuscripts that Caius was a very good Greek scholar. The toast of "Prosperity to the College" having been proposed by the Bishop of ELY, was replied to by the MASTER

Good weather, good speaking, and great hospitality combined to make the commemoration a notable event in the medical world.

## THE CORONERSHIP FOR THE CENTRAL DISTRICT OF THE METROPOLIS.

IN connexion with the appointment of a successor to Dr. G. Danford Thomas, the late coroner for the Central District of the metropolis, the London County Council on Oct. 11th, at the first meeting after the summer recess, received a report from the Public Control Committee recommending the rearrangement of the coroners' districts in North London. Under the Coroners Act, 1892, a vacancy must be filled within three months of its occurrence, so the new appointment must be made not later than Nov. 5th. In consequence of the large size of the central coroner's district the committee in 1891 decided that the district should be divided into two at a suitable opportunity, division to be made as nearly as possible on the basis of the number of inquests. Owing to the Council being in recess when the present vacancy occurred time would not permit of the necessary steps being taken before Nov. 5th to effect an alteration of the boundaries of the district. The committee proposed, therefore, that a coroner should be appointed to the district as at present constituted but at a salary based upon the work in the portion of the district which would be left to him after the boundaries had been rearranged.

The Council in 1895 passed a series of resolutions directed to improving the conditions under which the duties of coroners were performed. It was then pointed out that in London there were ten coroners whose duties and salaries varied considerably; that it appeared probable that a smaller number would suffice under new arrangements; and that it would be more dignified if the position of coroners approximated more nearly to that of stipendiary magistrates with districts about equal in amount of work, and salaries not dependent on the number of inquests held, and with proper courts, including a clerk and other officials necessary in a court of inquiry. The recent Departmental Committee largely endorsed this view, and a Bill now before the House of Commons put the matter in a definite shape. As to the new appointment, therefore, regard should be had to the possibility of alteration of the law.

The committee had come to the conclusion that the arrangement foreshadowed in 1891 was hardly desirable, and that instead of forming an additional district certain modifications should be made in the coroners' districts north of the Thames. The boroughs of Paddington and St. Marylebone should be transferred from the Central to the Western District, and the portion of Finsbury known as the parish of St. Luke should be transferred from the North-Eastern to the Central District. This rearrangement would divide the work about equally between the four coroners' districts north of the Thames, and the work of each district, the committee thought, would not be beyond the powers of a coroner who devoted his whole time to the duties of his office. The new Western District would comprise Hammersmith, Fulham, Kensington, Chelsea, Paddington, and St. Marylebone, with an aggregate population of 839,024, a total of deaths in 1909 of 11,220, and an average number of inquests during five years of 1035. The new Central District would contain Hampstead, St. Pancras, Islington, Holborn, and Finsbury, with a population of 831,903, a total of deaths of 11,927, and an average number of inquests of 1118.

With regard to remuneration, the committee stated that it had been the practice to calculate a coroner's salary upon the basis of a definite sum per inquest and the average number of inquests held, but the committee proposed that a departure should be made from this practice. Hitherto the basis had been 30*s.* per inquest until the salary reached £1350, but no salary went beyond that amount unless the average number of inquests held on a basis of 21*s.* per inquest would produce a higher salary. The earlier basis of £1 6*s.* 8*d.* per inquest, with an allowance of 9*d.* a mile for travelling expenses, had been reverted to in the case of some of the districts. The committee recommended that the salary of the new coroner for the Central District should be £1250 a year, this amount to be regarded as including £250 to meet the expenses of the office, comprising payment of deputy, provision of office accommodation, clerical help, &c. If the Council made the proposed rearrangement of districts, additional work would fall upon Dr. C. Luxmoore Drew, the coroner for the Western District, whose salary should be raised from £1126 to £1400.

In fixing these salaries the committee had in mind the possibility that an amendment of the law might provide for the pensioning of whole-time coroners without requiring them to contribute by a deduction from their salaries. The adoption of the scheme outlined would effect a saving of nearly £800 a year.

The committee recommended that a petition be presented to the King praying him to order the alterations proposed in the coroners' districts; that notice thereof be given to the coroners, and that they be consulted before the petition is presented; and that an advertisement be issued inviting applications for the appointment to the Central District.

When the report came before the Council a member asked the Chairman whether persons who had written to councillors asking for their votes in connexion with the appointment would be disqualified under the standing orders of the Council.

The Chairman replied that if such letters had been written they were highly improper, but as the vacancy had not been advertised, technically no breach of the standing orders had been committed.

The Council adopted the Public Control Committee's proposals and decided to advertise for applications for the post of coroner for the Central District at a salary of £1250 a year.

# Public Health.

## ANNUAL REPORTS OF MEDICAL OFFICERS OF HEALTH.

*County Borough of Birkenhead.*—At midsummer of last year the population of this borough was estimated at 120,955; the birth-rate for the year was 30·9, and the death-rate 15·9 per 1000 in each case. The infantile mortality was 122 per 1000 births. In connexion with this latter rate Dr. R. Sydney Marsden discusses the question of adopting the Notification of Births Act, and he concludes that as such adoption would entail considerable expense, and as voluntary work and advice are now being carried out, it is a question whether the advantages gained would be equivalent to the annual outlay required. In support of his opinion he selects certain towns in the North-West district which have adopted the Act, since in his view only towns in this district can be fairly compared with Birkenhead. These towns are Burnley, Preston, Bolton, Stockport, St. Helens, Liverpool, and Bootle, and of these the last three have much higher birth-rates than the remainder. As regards infantile mortality, Dr. Marsden shows that in nearly every year since 1900 the Birkenhead birth-rate is lower than all the others, except Bolton; and he observes that although the Notification of Births Act has been adopted in all of them, their returns do not show any advantage to have accrued therefrom over Birkenhead—i.e., their rates are still higher than those of Birkenhead. But Dr. Marsden does not tell us the dates at which the Act in question was adopted in the several towns mentioned; and all that it appears can be said is that in the majority of these towns—all, in fact, except St. Helens—there was a substantial decrease in 1909 in the infantile mortality-rate, and in several the actual rate of decrease was greater than that of Birkenhead. The problem really has to be settled by considering the fall in each town in relation to its own rate rather than by any comparison between the several towns. But it is clear that excellent work is being done in Birkenhead by the health visitors.

*The States of Guernsey.*—Dr. H. Draper Bishop estimates the population of Guernsey at 44,145, the birth-rate for 1909 being 22·94 and the death-rate 11·62 per 1000 death at case. The infantile mortality was 109·6 per 1000 births, a rate which was only beaten in 1896 and 1903, in both of which years there was a wet and comparatively cold autumn. Two cases of human diphtheria are stated to have been contracted from a puppy, the nasal discharge manifesting diphtheria bacilli, while one case is attributed to a sick cat. There were four cases of enteric fever which occurred one after the other in, or in connexion with, the same house and which appear to have been due to personal infection. It seems, however, that they were locally attributed to witchcraft. There was during 1909 a severe outbreak of enteric fever at St. Brieuc in France, and as a result the Royal Court of Guernsey, at the instance of the Board of Health, passed an ordinance forbidding the importation of oysters and other molluscs from France. Dr. Bishop expresses the hope that this ordinance may be made a permanent one. This is a method of dealing with impure shell-fish which might be considered by our own Parliament. Arrangements have now been made by the States for granting compensation to the owners of cattle slaughtered for tuberculosis, and a mutual insurance company has been formed towards the same end. There were 756 Guernsey cattle exported during 1909, of which number 703 were sent to the United States. Of this total only four reacted to the tuberculin test. Nineteen cattle were slaughtered during 1909 owing to their having tuberculosis, and in each instance the remaining animals of the herd were tested by the States veterinary surgeon. Dr. Bishop thinks that bovine tuberculosis should soon become extinct in Guernsey. The most pressing need of the island from a sanitary standpoint is the provision of a satisfactory water-supply.

*The City of York.*—Dr. Edmund M. Smith reports that an arrangement was made with the registrar of the local cemetery in 1907 to forward weekly returns of the particulars concerning each still-birth sent for burial, and during 1909 there were 107 such notices received. When necessary, further inquiries were made. Of the total number in question 73 were notified for burial by medical practitioners, 32 by registered, and 2 by unregistered midwives. Referring to the subject of cancer, Dr. Smith insists upon the need for the education of the public regarding the earlier symptoms of this disease, and he observes that if women would appreciate the possible gravity of abnormal discharges, and at once seek medical advice, much of the mortality from uterine cancer might be avoided. York is one of the relatively few towns which still obtain their water-supply from a river through the agency of a private water company. In this case the water is taken from the Ouse about a mile above the centre of the city, the water being first screened and submitted to settlement in subsiding reservoirs, then passed through a mechanical filter, and finally through sand filter-beds. It does not appear that any prolonged storage prior to filtration is provided for, but the filtrate is regarded as yielding satisfactory bacteriological results.

*Borough of Scarborough.*—Dr. John Knight, basing his estimate upon the number of occupied houses, places the population of Scarborough at 41,480, instead of 42 156, as estimated by the Registrar-General. The birth-rate, 18·8 per 1000, showed an increase on the 17·7 for 1908. Scarborough, as regards its births, occupies an unenviable position in the matter of illegitimacy, which is attributed largely to the excessive proportion of single women at conception ages. For the period 1876–1905 the illegitimate births per 1000 births in Scarborough amounted to 84, as compared with 44 for England and Wales, and in the year 1909 the local illegitimate rate was no less than 107 per 1000 births. The infantile mortality rate evinces a very gratifying fall since the commencement of the present century, and the rate for 1909 was only 72 per 1000 births. This rate, as Dr. Knight points out, is the more satisfactory in that it obtains notwithstanding the marked rise in the illegitimate birth-rate referred to above—that is to say, there has been a larger number of illegitimate lives, and, as is well known, it is among such lives that the death-rate usually reaches a very high figure. In these circumstances it is refreshing to find Dr. Knight, while according due credit to the various agencies at work, cordially rendering unto Nature that which is her due, and admitting that the cool wet summer was hostile to the prevalence of epidemic diarrhœa. He rightly points out, however, that similar weather conditions have frequently occurred before since 1876 without any corresponding reduction in the infantile mortality rate. Among the steps taken to reduce the infantile mortality in Scarborough is a voluntary system of notification of births of such thoroughness that it has not been deemed desirable to adopt the Notification of Births Act, 1907. There are also mothers' meetings where the babies are weighed and the results recorded, and a "babies' welcome" club, in which expectant mothers are encouraged to save to meet the expenses of their confinement. It had been decided to set aside part of the accommodation at the isolation hospital for the education of tuberculous patients, but an epidemic of scarlet fever prevents the realisation of the proposal.

*City of Cardiff.*—Cardiff, which has an estimated population of nearly 200,000, derives its water from upland gathering grounds some 35 miles from the city, and the water as supplied to the inhabitants manifests an excellent degree of purity, B. coli in 40 cubic centimetres being generally absent. All the meat consumed in the city is slaughtered in the municipal slaughter-houses, there being no private slaughter-houses, and in order to improve the standard of meat inspection two new inspectors specially conversant with meat have been appointed to act under the direction of the veterinary surgeon. The Notification of Births Act, 1907, was adopted in 1908, and Dr. Edward Walford reports that it has been very useful as a means of reducing infantile mortality. Two health visitors have been appointed, and six centres have been established in suitable parts of the city to which mothers are invited to bring their babies for weighing and advice. Special attention has also been paid to the milk-supply of the town, and powers have been obtained from Parliament under a local Act towards this end, including what are known as the model milk clauses which, *inter alia*, enable the medical officer of health to take samples of milk either within or without the city. Voluntary notification of pulmonary tuberculosis has been in force in Cardiff since 1901 and the number of notifications received in 1909 was 171. In connexion with this scheme educational measures have been practised and arrangements made for gratuitous bacteriological examination. Dr. Walford evidently favours the establishment of a tuberculosis dispensary, and it looks as if one may shortly be in operation. The question of erecting a municipal crematorium has on several occasions been before the sanitary authority, but no decision has yet been arrived at.

## VITAL STATISTICS.

### HEALTH OF ENGLISH TOWNS.

In 77 of the largest English towns 7741 births and 4163 deaths were registered during the week ending Oct. 8th. The annual rate of mortality in these towns, which had been equal to 13·0 and 13·3 per 1000 in the two preceding weeks, declined last week to 12·8. During the 13 weeks of last quarter the death-rate in these towns averaged 11·8 per 1000, corresponding with the rate that prevailed in the third or summer quarter of last year. In London the death-rate last quarter, calculated on the probably over-estimated population, did not exceed 11·0 per 1000. The lowest reported annual death-rates in these 77 towns last week were 3·7 in King's Norton, 6·5 in Handsworth, 6·6 in West Bromwich, and 7·1 in Tottenham; the rates in the other towns ranged upwards to 18·9 in Stoke-on-Trent, 19·0 in Rochdale, 20·7 in Sunderland, and 21·8 in Burnley. In London the reported death-rate last week did not exceed 12·3 per 1000. The 4163 deaths registered in the 77 towns last week showed a decline of 168 from the number returned in the previous week, and included 497 which were referred to the principal epidemic diseases, against numbers declining from 720 to 537 in the six preceding weeks; of these 497 deaths, 311 resulted from diarrhœa, 53 from measles, 49 from whooping-cough, 42 from diphtheria, 21 from scarlet fever, and 21 from enteric fever, but not one from small-pox. The mean annual rate of mortality from these diseases in the 77 towns last week was 1·5 per 1000, against rates ranging from 2·2 to 1·6 in the six preceding weeks. No death from any of these epidemic diseases was registered last week in East Ham, Hornsey, Reading, Bournemouth, Handsworth, Hastings, or Great Yarmouth; the annual death-rates therefrom ranged upwards, however, to 3·9 in Burnley and in Huddersfield, 4·2 in Grimsby, and 4·4 in Bury. The deaths attributed to diarrhœa in the 77 towns, which had declined in the five preceding weeks from 527 to 364, further fell last week to 311; in the several towns, however, they caused annual rates ranging upwards to 2·6 in Blackburn and in Preston, 3·4 in Burnley, 3·5 in Bury, and 4·2 in Grimsby. The 53 fatal cases of measles showed an increase of 21 upon the low number in the previous week, and included 18 in London, 11 in Liverpool, 5 in Manchester and Salford, and 3 in Leeds. The 49 deaths from whooping-cough also showed an increase; this disease was most fatal in Rotherham, where the 3 deaths were equal to an annual rate of 2·4 per 1000. The 42 deaths referred to diphtheria showed a further increase upon the numbers in recent weeks, and exceeded the number in any previous week of this year; they included 13 in London and its suburban districts, 4 in Stoke-on-Trent, and 3 in Leeds. The fatal cases of scarlet fever, which had been 27 and 25 in the two previous weeks, further declined last week to 21, including 2 in Bristol and in Sheffield and 3 in Salford. The deaths referred to enteric fever, which had increased in the four preceding weeks from 12 to 38, declined again last week to 21, of which 7 were registered in London and 3 in Hull. The number of scarlet fever patients under treatment in the Metropolitan Asylums Hospitals and the London Fever Hospital, which had increased in the seven preceding weeks from 1423 to 1653, had further risen to 1706 on Saturday last; 245 new cases of this disease were admitted to these hospitals during the week, against 201, 210, and 249 in the three preceding weeks. The 1148 deaths from all causes in London last week included 165 which were referred to pneumonia and other diseases of the respiratory system, showing a decline of 13 from the number in the previous week; they were 7 below the corrected average number in the corresponding week of the five years 1905–09. The causes of 33, or 0·8 per cent., of the deaths registered in the 77 towns during the week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Leeds, Bristol, West Ham, Bradford, Newcastle-on-Tyne, Hull, Nottingham, Leicester, and in 50 other smaller towns; the 33 uncertified causes of death in the 77 towns last week included 7 in Liverpool, 4 in Birmingham, and 2 each in London, St. Helens, Rochdale, Sheffield, and Gateshead.

### HEALTH OF SCOTCH TOWNS.

In eight of the principal Scotch towns 845 births and 521 deaths were registered during the week ending Oct. 8th. The annual rate of mortality in these towns, which had been equal to 13·0, 13·6, and 13·7 per 1000 in the three preceding weeks, further rose to 14·4 in the week under notice. During the 13 weeks of last quarter the death-rate in these towns averaged 12·9 per 1000, and exceeded by 1·1 the mean rate during the same period in the 77 largest English towns. The annual death-rates in the eight Scotch towns last week ranged from 10·2 and 11·7 in Leith and Paisley to 16·9 in Dundee and 19·6 in Perth. The 521 deaths from all causes in the eight towns last week showed a further increase of 24 upon the numbers in the three preceding weeks, and included 69 which were referred to the principal epidemic diseases, against 78, 72, and 83 in the three preceding weeks; of these 69 deaths, 40 resulted from diarrhœa, 14 from diphtheria, 8 from whooping-cough, 5 from scarlet fever, and 2 from "fever," but not one either from measles or small-pox. The mean annual rate of mortality from these epidemic diseases in the eight towns last week was equal to 1·9 per 1000, the rate from the same diseases in the 77 English towns being only 1·5 per 1000. The deaths attributed to diarrhœa in the Scotch towns, which had been 45, 47, and 51 in the three preceding weeks, declined last week to 40, but included 23 in Glasgow, 4 in Dundee and in Paisley, and 3 in Aberdeen and in Leith. The 14 deaths from diphtheria corresponded with the number in the previous week; 8 occurred in Glasgow and 4 in Edinburgh. The 8 fatal cases of whooping-cough also corresponded with the number in the previous week, including 4 in Glasgow and 3 in Greenock. Three of the 5 deaths from scarlet fever occurred in Glasgow, as did both the deaths referred to "fever"; of the latter, 1 was certified as enteric and 1 as cerebro-spinal meningitis. The deaths referred to diseases of the respiratory system in the eight towns, which had been 64 and 61 in the two preceding weeks, increased to 72 in the week under notice, and exceeded by 13 the number in the corresponding week of last year. The causes of 12, or 2·3 per cent., of the deaths in the eight towns last week were not certified or not stated; in the 77 English towns the proportion of uncertified causes of death last week did not exceed 0·8 per cent.

### HEALTH OF IRISH TOWNS.

In 22 town districts of Ireland, having an estimated population of 1,151,790 persons, the mean annual rate of mortality during the 13 weeks of last quarter averaged 16·3 per 1000; the mean rate during the same period did not exceed 11·8 in the 77 largest English towns and 12·9

in the eight principal Scotch towns. The annual death-rate in Dublin during the week ending Oct. 8th was equal to 19·5 per 1000, against 18·8, 21·4, and 20·2 in the three preceding weeks; this rate, however, exceeded by 7·2 per 1000 that which prevailed last week in London. The 151 deaths from all causes in Dublin last week showed, however, a further decline of 5 upon the numbers in the two preceding weeks, and included 20 which were referred to the principal epidemic diseases, against 29 and 30 in the two previous weeks; these 20 deaths were equal to an annual rate of 2·6 per 1000, the rate from the same diseases last week in London being only 1·1. The 20 deaths from these epidemic diseases in Dublin included 12 from diarrhœa, 2 each from diphtheria, enteric fever, and whooping-cough, and 1 each from measles and scarlet fever. The fatal cases of diarrhœa in Dublin, which had been 21 and 27 in the two previous weeks, declined to 12 last week. The causes of 3, or 2 0 per cent., of the deaths registered last week in Dublin were not certified, corresponding with the number in each of the two preceding weeks. In Belfast during last week 200 births and 94 deaths were registered. The deaths showed a further decline from the numbers returned in recent weeks and were fewer than in any previous week of this year. The annual rate of mortality in the town, which had been equal to 16·3 and 14·0 per 1000 in the two preceding weeks, further declined last week to 12 5. The 94 deaths from all causes in Belfast last week included 9 which were referred to the principal epidemic diseases, against 18, 17, and 12 in the three preceding weeks, and were equal to an annual rate of 1·2 per 1000; of these 9 deaths, 7 resulted from diarrhœa, and 1 each from measles and whooping-cough. The fatal cases of diarrhœa in Belfast, which in the six preceding weeks had declined from 29 to 7, were again 7 last week. The causes of all but one of the 94 deaths registered in the town last week were duly certified either by a registered medical practitioner or by a coroner.

## THE SERVICES.

### ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Staff-Surgeons: A. R. H. Skey to the *Inflexible*, on recommissioning; and M. P. Jones to the *Hogue*. Surgeons: C. G. Sprague to the *Inflexible*, on recommissioning; G. A. S. Hamilton to the *Juniter*, additional, for disposal in the Portsmouth Subdivision of the Home Fleet; and J. P. Berry to the *Orontes*.

### ROYAL ARMY MEDICAL CORPS.

Major John J. C. Watson, C.I.E., retires on retired pay (dated Oct. 8th, 1910).

Lieutenant-Colonel John Battersby is placed temporarily on the half-pay list on account of ill-health (dated Oct. 2nd, 1910).

Captain Denis J. F. O'Donoghue retires receiving a gratuity (dated Oct. 12th, 1910).

### SPECIAL RESERVE OF OFFICERS.

*Royal Army Medical Corps.*

Lieutenant George F. Randall is seconded for service under the Colonial Office (dated August 13th, 1910).

### DEATHS IN THE SERVICES.

Brigade-Surgeon-Lieutenant-Colonel Robert Nasmyth MacPherson (A.M.S. retired), recently at Weymouth, in his seventy-third year. Shortly after qualifying in 1864 he entered the army as assistant-surgeon, being first attached to the Royal Field Artillery and afterwards the Army Medical Staff. He had a considerable amount of foreign service and served 15 years in India. He was at one time medical officer in charge of the military hospital at Portsmouth.

### ROYAL NAVAL HOSPITAL, HASLAR.

The prizes to the newly-entered surgeons who have been under instruction at the Royal Naval Hospital, Haslar, were distributed on Oct. 7th by Admiral Sir John Durnford, president of the Royal Naval College, Greenwich. Among those present was the Director-General of the Medical Department of the Royal Navy, Sir James Porter, K.C.B. After Inspector-General T. D. Gimlette had read a very satisfactory report the prizes were distributed. Surgeon W. H. King won the gold medal, Surgeon H. E. R. Stephens the silver medal and prize for analysis, Surgeon C. F. O. Sankey the prize for hygiene, and Surgeon J. S. Ward the prize for tropical medicine. Admiral Sir John Durnford, in addressing those present, said the provision and organisation of the services in peace and war was of considerable importance to the nation and of deep interest to the naval medical and nursing services. The question as to whether any steps were necessary to render the national forces more efficient had been considered by a committee with which he had been connected and certain recommendations had been unanimously agreed upon. Those recommendations had not yet been made public, but he hoped that effect would soon be given to them.

### JOURNAL OF THE ROYAL ARMY MEDICAL CORPS.

The first place in the October issue of this journal is given to an article by Major C. E. Pollock on Florence Nightingale in regard to her work in connexion with the military hospitals in the East in 1854–55. By reason of her sex and the nature of the work to which she dedicated her life she is associated in the public mind with a very large amount of sentiment which is apt to obscure the real woman, and Major Pollock has done a useful work in making clear the wonderful organising capacity of her brain. The article, which will be read with great interest, contains the rules which Miss Nightingale laid down for her nurses, as well as letters written from Scutari and Balaklava, and, as Major Pollock points out, show what a complete grasp Miss Nightingale had obtained of the whole subject of military nursing by females after little more than six months' experience. The article concludes:—

> More fortunate than many other great public benefactors, Florence Nightingale was permitted to see the fruits of her teaching in the establishment of numerous training schools for nurses, and the elevation of nursing from an occupation followed by elderly women of no education into a scientific profession under the patronage of the highest ladies in the land. It may not be generally known that the red uniform cape worn by the ladies of the Queen Alexandra's Imperial Military Nursing Service is modelled on that originally introduced by Florence Nightingale for the nurses whom she took with her to Scutari. This cape may therefore be regarded as a memorial to the great founder of military nursing.

### BRITISH RED CROSS AND TERRITORIAL NURSING NOTES.

On Oct. 5th Lord Basing presided at a meeting of the Hampshire branch of the British Red Cross Society, which was held at Odiham, when it was decided to form a voluntary aid detachment.

Voluntary aid detachments are about to be formed in Carlisle.

The Mayoress of Westminster and Lord Cheylesmore have issued on behalf of the Red Cross Society an appeal to large employers of labour for assistance in raising in Westminster voluntary aid detachments to afford supplementary aid to the Territorial Medical Service in national emergency.

Deputy-Inspector-General Thomas Edward Henry Williams, R.N. (retired), has been appointed Resident Examining Officer for Recruiting Duties at Bristol.

THE BRITISH RED CROSS SOCIETY.—A public meeting was held on Oct. 7th at Exeter in connexion with the Exeter division of the British Red Cross Society. The Mayor presided, and there was a large and influential gathering. Sir Frederick Treves gave an interesting address on the Red Cross Society, and said that he could not imagine any project that appealed more to patriotism than to offer aid to sick and wounded fellow-countrymen in the event of this country being invaded.

THE NORTH DEVON INFIRMARY, BARNSTAPLE.—The annual meeting of the subscribers to the North Devon Infirmary was held on Oct 4th under the presidency of the Mayor. The medical report stated that during the past year the in-patients numbered 754, against 815 in the previous 12 months. 2614 out-patients were treated, compared with 2904 in the preceding year. The financial statement showed a deficit of £371. The committee stated that through the generosity of the late Mr. W. Allen a complete new dental department had been opened in connexion with the infirmary, and added that through want of funds it had been reluctantly decided to close one of the wards last March.

# Correspondence.

"Audi alteram partem."

## THE MEANING OF THE AUDIBLE SOUNDS IN MITRAL STENOSIS.

*To the Editor of* THE LANCET.

SIR,—It may seem presumptuous on my part to criticise Dr. Alexander Morison's learned and closely argued paper contained in your issue of Oct. 8th, yet whilst agreeing in the main with his views, I hesitate to accept some of his conclusions as to the meaning of the second and third sounds which form part of the triple apical rhythm in mitral stenosis. He maintains that the second of these three sounds is produced by a left ventricular extra-systole, and that the third is in reality the second cardiac sound with a "bruit admixture." These are the conclusions which I would venture to discuss, but before doing so some preliminary remarks seem necessary.

In the first place I cannot regard the triple apical rhythm or a presystolic bruit as evidence of mitral stenosis, for although these sounds are commonly heard in children of 5 or 6 years, the "button-hole" mitral valve is practically unknown at this age. I do not doubt that stenosis does take place in many of these young children if they live long enough, but in early life the triple apical rhythm and presystolic bruit are evidence not of stenosis but of roughened and perhaps incompetent mitral valves.

In the second place, I would deprecate the use of the term "reduplicated second sound" to describe the second and third sounds which form part of the apical triple rhythm. For were they indeed due always to asynchrony in the closure of the aortic and pulmonary valves respectively, as the term implies, they should be audibly divided at the base of the heart (at all events in a child) and not audible only "in a limited area—namely, the inner apex or, more precisely, in an area usually extending from the apex to the left edge of the sternum and upwards as far as the fourth rib."

Of course, reduplication of the second sound *may* be audible at the apex, but if it is really due to asynchrony in closure of the aortic and pulmonary valves, it must also be heard at the base, whereas in the cases to which I refer the triple sound is heard only at the apex. A further reason for disputing that the second and third sounds of the triple apical rhythm are reduplicated cardiac second sounds is that they are quite unlike each other in character, whereas the divided sounds produced by asynchrony in closure of the aortic and pulmonary valves respectively are precisely similar in timbre and duration.

The simplest explanation of the triple apical rhythm is that the first of the three sounds is the heart's first sound (often accompanied by a systolic bruit), the second is the ordinary normal cardiac second sound due to sudden tension of the aortic and pulmonary valves, whilst the third is a diastolic bruit produced at the mitral orifice. This diastolic bruit is direct and not regurgitant, for it is never conducted outside the apex of the heart into the axilla. In quality it is never short and sharp like the second of the three sounds, but is always softer and more prolonged than the second sound, and its duration often varies almost from hour to hour.

When the heart is beating forcibly and rapidly this diastolic bruit becomes shorter, but, as Dr. Morison says, "it remains a long sound as compared with the second." When cardiac action is slow and languid the bruit may be prolonged throughout the diastolic period until it becomes a typical rumbling and crescendo presystolic murmur.

Dr. Morison's suggestion is that the second of the triple apical sound is "a left ventricular extra-systole, so closely approximated to the preceding systole as to be *graphically* unregistrable but nevertheless audible." I cannot help thinking that he weakens his suggestion by admitting that this ventricular extra-systole is "graphically unregistrable," for whilst sharing his caution in drawing inferences from graphic records, I should expect that our delicate modern instruments of precision would afford some evidence of a ventricular extra-systole in a cardiogram. Surely a muscular contraction sufficient to produce a sound so audible as this is, would reveal some indication of its presence on a tracing.

Again, were it due to a ventricular extra-systole one might expect it to be accompanied at times by a systolic bruit, considering that the triple rhythm is as a rule associated with mitral disease. But to my ear at all events, the second of the triple sounds is always clear, short, and sharp, and in all respects resembles the normal second cardiac (aortic and pulmonary) sound. I find it difficult, moreover, to believe that close approximation of an ordinary and an extra-systole prevents the latter from being graphically recorded, for in my experience the interval between them is of definite and appreciable duration.

The third sound of the triple apical rhythm Dr. Morison regards as the second cardiac sound with a "bruit admixture." I quite agree as to the bruit, and in the case which forms the text of Dr. Morison's paper no doubt there was a genuine reduplication of the second cardiac sound heard both at base and apex, and obscured at the latter site by a diastolic bruit. But for reasons already mentioned I am disinclined to believe that the third sound of the triple apical rhythm is only a reduplicated second cardiac sound. I regard it as a diastolic bruit which in early stages of mitral disease may become temporarily presystolic, and eventually may become permanently so. In some cases I admit that it may be associated with a reduplicated second sound, but as a rule it is a diastolic mitral bruit and nothing else.

Dr. Morison is, I believe, correct in attributing the bruit to a weak flow of blood from auricle to ventricle through a diseased (but not necessarily stenosed) mitral valve, and when it becomes prolonged and presystolic in character the sound is probably due partly to suction of blood through the diseased mitral valve by the expanding ventricle, and partly to the final impulse given by systole of the auricle to its contents.

The meaning of the triple apical rhythm is not merely of academic or physiological interest. Asynchrony inclosure of the aortic and pulmonary valves is of minor importance as compared with mitral disease. Hence my object in writing is rather to protest against the common teaching that the second and third sounds of the apical triple rhythm are to be regarded merely as reduplicated second cardiac sounds than to take exception to Dr. Morison's views which necessarily bear more weight than my own.

I do not dispute that true reduplication of the second cardiac sounds may be audible at the apex, but such cases need careful discrimination from those in which the third sound of the triple apical rhythm is a mitral diastolic bruit.

I am, Sir, yours faithfully,

LEONARD GUTHRIE.

Upper Berkeley-street, W., Oct. 8th, 1910.

## EFFICIENT VENTILATION AT SEA.

*To the Editor of* THE LANCET.

SIR,—I entirely dissent from the views expressed by the writer of the note in THE LANCET of Oct. 8th. The public are quite right in the use of fans, and no better means could be taken for relieving the discomfort of ship cabins. The chemical purity is not the only need, nor in all cases is it the first need, of ventilation. In warm, moist, stagnant air we suffer from the strain on our heat-regulating mechanism, and the movement of the air relieves this. If the writer would let me put him into my experimental chamber at 80°-85° F. (wet bulb) he would cry out for the fans to be put on, and he would neither sense nor care if the $CO_2$ rose, not to 0·5 per cent., as in the closest and most crowded living room, but to 4–5 per cent.! In close atmospheres we long for air and for moving air. A close day is a moist, warm day with no wind stirring. We long for wind. The common expressions of everyday life show this. All the text-book teaching is based on an ideal of chemical purity. But all the experimental evidence shows that 1 or 2 per cent. more or less $CO_2$ or oxygen in the air breathed makes no physiological difference. There is no evidence worth a jot that the traces of organic material found in close air are harmful. As in the case of water, the organic material is only an indicator of the number of bacteria present in the air.

When the evidence is sifted we find the claim for chemical purity (in the absence of dangerous pollutions such as CO) can be based justly on bacteriological grounds alone. We catch colds in spite of all our systems, and the open-air man as a rule does not, in spite of exposure to the same infection. Moving cool air by its cooling effect tones up the skin and nervous system, keeps us active, increases our metabolism,

the oxygen taken in, and the food later; by increasing muscular activity it aids the circulation, for the muscles pump the blood as, or even more, effectively than the heart. After muscular activity the heart is relieved and the arterial pressure kept down.

The immune properties of the blood are brought into action by an active circulation and are probably increased by a greater metabolic turnover. Open-air treatment is not a question of chemical purity of the air, but acts by increasing the metabolism, and so the vigour of the body. The cool moving quality of the air is the active agent, and it is continual exposure to such air and to active muscular exercise that we owe most of the benefit of sea and mountain holidays. The relief given by fans in an air-tight chamber at 85° F. (wet bulb) is complete, when eight men have been shut in it for 30 minutes and the $CO_2$ has reached 5 per cent. No fresh air is brought in, but the stagnant stale air is whirled and it cools the sweating body.

I am, Sir, yours faithfully,

LEONARD HILL.

London Hospital Medical College, Oct. 11th, 1910.

## THE PROPERTY IN PRESCRIPTIONS.

*To the Editor of* THE LANCET.

SIR,—The views of my friend Mr. H. Wippell Gadd as to the ownership of prescriptions do not seem to me to be conclusive. I hold that a prescription is a confidential message sent to the pharmacist, instructing him how to prepare and label certain remedies, intended to bring about the cure for which the physician is engaged. I submit, therefore, that the document, being a legal warrant to the chemist to supply certain, perhaps poisonous, drugs to the patient, for which the pharmacist might otherwise be punishable by law, should, properly speaking, be retained by him.

Consider the document carefully. It is written in a tongue presumed to be unknown to the patient. It opens with a certain mystic symbol ℞, which is taken to be a contraction for the imperative "recipe," "take thou"; in other words, it is a distinct instruction addressed to a subordinate. It runs, for instance:—

℞ Morphinae acetatis ... ... ... gr.ss.
Pulveris colchici ... ... ... gr.iii.
Fiat pilula, quartis horis sumenda.
Mitte vi. folio argenteo involve.

That is, the chemist is directed to take so much morphine and so much colchicum, to make so many pills, to silver them in a certain way, and to put on a certain instruction for the patient.

It seems to be suggested that the physician's contract is to furnish a prescription to cure the malady, that therefore it is the patient's property. I submit not. The pharmacist is not an independent contractor; he acts merely as agent for the doctor. It is not for him to disclose the nature or contents of the prescription or to comment on its suitability. Neither is it for him to dispense morphine to anyone who chooses to ask for it; he must have a medical prescription—and a medical prescription is not any favourite formula of a bygone physician, copied from the books, but a definite order of an actually attendant physician for the specific patient, not for any infant or idiot. Suppose I write an order for the nurse, "Give the patient an enema of soap-and-water," is the prescription his property? Can he produce it as an authorisation at any time to any nurse to give the enema at my instructions? I submit not; and I suggest that the prescription to the chemist is on all fours with this case rather than with those from other professions which Mr. Wippell Gadd cites.

I am, Sir, yours faithfully,

J. C. MCWALTER, M.D. Brux., D.P.H., F.F.P. & S.G.,
Oct. 1st, 1910. Of the King's Inns, Barrister-at-Law.

## ON THE FAILURE OF NERVE ANASTOMOSIS IN INFANTILE PALSY.

*To the Editor of* THE LANCET.

SIR,—We were much interested in Dr. A. Stoffel's criticism of Sept. 10th of our paper in THE LANCET of April 2nd, 1910, on the Failure of Nerve Anastomosis in Infantile Palsy. This criticism is founded chiefly on some valuable work of Dr. Stoffel published in the *Zeitschrift für Orthopädische Chirurgie*, Vol. XXV., 1910. We may therefore be pardoned for not having availed ourselves of his help, since our cases were operated upon from two to five years ago.

Two points may be mentioned in which we fear the absence of a detailed account of our cases may lead to misinterpretation. First, Mr. Murray took care that an actual severance of healthy nerve fibres was always made; we had long been aware of the necessity for this. Secondly, in Case 4, when we wrote, "the extensors of the right foot alone were paralysed," we meant to imply that the sural muscles were unaffected and not that the peroneal group (musculo-cutaneous) was free.

Dr. Stoffel's paper is largely a record of dissection results, and it still remains to be shown how far these results can be applied at the operation table. We think that to some extent this may be done, and the partial success which he has obtained in deltoid and biceps paralysis by a double nerve anastomosis—i.e., circumflex to ulnar and musculo-cutaneous to median—is gratifying. This procedure was in our mind when we stated that in our opinion too much had been attempted when dealing with cases of infantile palsy, and that a less ambitious operation might be more successful. Dr. Stoffel believes that the fibres to individual muscles retain a given position throughout a nerve trunk, and his contribution to this important question is a most careful one. We venture, however, to make three observations on this matter. 1. It is known that at least one-third of a nerve trunk may be cut without any appreciable palsy resulting. 2. That the most satisfactory demonstration of the course of nerve fibres is to be obtained by the partial section of a nerve trunk and a study of the sites of the resulting Marchi degenerations. 3. That the dissection method may, as a nerve fibre is followed up, unravel the twisted skein and so produce a deceptive appearance of the fibres lying in a given sector of the trunk.

We are, Sir, yours faithfully,

R. W. MURRAY.
Liverpool, Oct. 9th, 1910. W. B. WARRINGTON.

## THE ST. JOHN AMBULANCE ASSOCIATION AND THE TERRITORIAL FORCE AMBULANCE SERVICE.

*To the Editor of* THE LANCET.

SIR,—As a member of the Order of St. John of Jerusalem and of its ambulance department I was much attracted and interested by the very ably written article on that Order which appeared in THE LANCET of Sept. 24th. It is but a few weeks ago that I read in the *Hospital* a paragraph in which it was asserted that the sole *raison d'être* of the Order was its ambulance department. Tradition, it may be, weighs little with some persons. To my mind, the Order, of which Sismondi wrote that a nation organised as it was could conquer the world, and Gibbon that though "they had neglected to live they had been prepared to die in the service of Christ," embodies traditions the grandeur of which can hardly be surpassed. Of such traditions, however, up-to-date education knows and recks little.

I gather that the death of Miss Florence Nightingale, who was a Lady of Grace of the Order of St. John, inspired the admirable paper to which I have referred. In the public expression of that strong national feeling to which her death gave rise I also found food for thought. If others have done splendid work in the cause of aid to the sick and wounded, the "Lady of the Lamp" was the one on whose brow in the eyes of the people the halo of heroism rested. It seemed to me that only the irony of fate could have willed that the two organisations, to which the country looks for the provision of the ambulance service of its Territorial Force, should at the moment of her decease be very much at variance. Both sent wreaths for her funeral; both were represented at the memorial service at St. Paul's; but this unanimity was merely conventional. In 1854 Miss Nightingale rescued a Secretary of State for War from the wrath of a nation exasperated by the reports of the sufferings of the sick and wounded in the Crimea. The War Office of 1910 would best repay their great debt of gratitude to Miss Nightingale by promoting peace between the "St. John Ambulance" and the "Red Cross."

Your article mentions many distinguished medical men as being members of the Order of St. John. I would fain have the privilege of selecting two of their number to act as mediators in the deadlock which is paralysing the War Office "Voluntary Aid" scheme. My selections would be

Sir Frederick Treves and Sir Arthur Conan Doyle. The latter wrote from South Africa ten years ago a most touching tribute (possibly in your columns) to the courage and devotion of the St. John Ambulance hospital orderly. The former stated at the banquet given by the Reform Club on April 30th, 1900, in honour of Sir William Mac Cormac and himself, that "there had never been a campaign in which the horrors of war had been so mitigated and the treatment of the wounded so complete" as in South Africa. To this noble work the St. John Ambulance Association contributed 2200 men, of whom about 70 died during the war.

I am, Sir, yours faithfully,

The Athenæum, Oct. 7th, 1910. A. C. YATE.

*** Since our correspondent's letter was received the War Office has entered into an agreement with the St. John Ambulance Association under which the Army Council can register St. John Ambulance Brigade and County Companies, under certain conditions, as Voluntary Aid Detachments. In this way further provision is made for the sick and wounded of the Territorial Force in case of war.—ED. L.

## THE ETIOLOGY AND DIAGNOSIS OF GERMAN MEASLES (RUBEOLA).

*To the Editor of* THE LANCET.

SIR,—Dr. C. Beards and Mr. W. L. Goldie, in their paper on German measles, published in your issue of Oct. 1st, make mention of certain "small yellowish plaques usually on the mucous membrane behind the last molar teeth of the lower jaw," and state that "as they are occasionally present in morbilli and scarlet fever they are of little value in diagnosis." In my experience these plaques or spots are not confined to patients suffering from rubella, morbilli, or scarlet fever, but will occasionally be found in children who are in good health. They usually form a group of which the posterior are much larger than Koplik's spots, though the anterior may closely resemble them. They are of a faint orange-yellow colour.

I think it is a pity that the writers of the paper do not employ the word "rubella" instead of "German measles" or "rubeola." The term "rubella" has suffered less misuse than any other designation; its brevity makes it better than "German measles"; it raises no false idea of origin, and avoids confusion. Further, it has been adopted by the majority of writers on infectious diseases of recent years to signify the disease in question. The term "German measles" is misleading and a little cumbrous. "Rubeola" is also misleading. It has been applied to measles (morbilli), e.g., by Corlett in his "Treatise on the Acute Infectious Erythemata" (1902). This writer agrees with others in the use of the word "rubella."

I am, Sir, yours faithfully,

E. W. GOODALL.

The Eastern Hospital, Homerton, N.E., Oct. 5th, 1910.

## THE TREATMENT OF THE MORPHIA HABIT BY "PANTOPON."

*To the Editor of* THE LANCET.

SIR,—The preparation of opium referred to by Dr. Oscar Jennings in THE LANCET of Oct. 8th as Pantopon is known in Great Britain as "Omnopon," and represents the total alkaloids of opium in the form of hydrochloric salts. The average dose is 1/5th to 1/3rd of a grain three times a day. For internal medication, tablets have been prepared consisting of "Omnopon" 1/10th of a grain triturated with sugar of milk. This form is suitable for the continuous use of "Omnopon" in suitable cases. Ampoules of 1 cubic centimetre of a 2 per cent. sterile solution of "Omnopon" are placed on the market. One cubic centimetre of this sterile solution equals 1/3rd of a grain "Omnopon." In addition to Dr. Oscar Jennings' work on "Morphinisme et Morphinomanie," other references to Pantopon will be found in *Münchener Medizinische Wochenschrift*, No. 25, 1910, (Sahli); "Therapie der Gegenwart," 1910, Book 5 (Hallervorden); *Therapeutische Monatshefte*, January, 1909 (Sahli); and *Münchener Medizinische Wochenschrift*, No. 7, 1910 (Heimann).—We are, Sir, yours faithfully,

THE HOFFMANN-LA ROCHE CHEMICAL WORKS, LTD.

Idol-lane, E.C., Oct. 11th, 1910.

## COMPULSORY INSURANCE AGAINST SICKNESS IN GERMANY:

### ITS BEARING ON THE MEDICAL PROFESSION.

(FROM A CORRESPONDENT.)

*Industrial Conditions Leading to Compulsory Insurance.*

THE introduction of steam power gave birth to those vast industries that now form a great part of a nation's assets and the developments of electricity tend to multiply those industries indefinitely. As a result of the conditions under which they work, the thousands of hands employed in manufactories and allied enterprises recently began to form a distinct body of the community at large. These workers are dependent for their livelihood on their daily wage, they have no personal interest in the fruits of their labours, and are not bound by any strong ties to a particular locality, but are free to seek their work according to momentary phases regulating demand and supply. In this they contrast with the tradesman or holder of land, however small the title to independence and ownership may be. Many workers are either not in a position or feel no inclination to save for the proverbial rainy day, and thus, when overtaken by some catastrophe, as sickness or want of employment, not only they but those dependent upon their earnings are cast upon the charity of the remainder of the community. This question marks one of our gravest social problems, all the more difficult to solve as the political element has entered largely into the minds of those actively engaged on the subject.

For some time past various countries have taken steps towards effecting a remedy in this state of affairs, and the granting of old-age pensions was the first step taken by Great Britain towards breaking with the time-honoured custom of leaving the individual subject to work out his own salvation. This may quite soon be extended by the compulsory insurance against sickness. A Government measure of this kind will naturally affect to a certain extent the interests of the medical profession, and it would be well to consider in time the points likely to be raised. As matters are at present, an agreement between a sick club or friendly society and a medical man is to all intents and purposes a purely business question, largely influenced by competition in the struggle for life. When the State, however, decides to introduce some social reform, it would be lacking in its duty towards safeguarding the interests of the whole nation it embodies by conferring benefits on a few to the exclusion of others, and it is here that the medical man's interests must be taken into consideration.

*State Insurance against Sickness in Germany.*

Among those countries that have already introduced State insurance against sickness, Germany, as the pioneer country, will serve as an apt illustration. The regulations regarding compulsory insurance against sickness, which are to a certain extent distinct from the insurance against accidents and the invalidity and old-age pensions, may be briefly summarised as follows:—

Every male or female person, regardless of age, whether unmarried or married, German subject or foreigner, employed in the country in any form of trade or work, receiving a salary or pay not exceeding £100 per annum, is compelled to be insured against sickness. Legally freed from this obligation are soldiers, officials, and servants of the empire, states, or municipalities, for which other provision has been made, also pharmaceutical assistants and apprentices. All persons whose income is under £100 a year may voluntarily insure themselves. The insured become members of a distinct sick club, of which many kinds are recognised. They may be divided into two classes:—1. Sick clubs composed of members belonging to the same profession or branch of trade in a certain locality. These are called local sick clubs, and each must have at least 100 members. Or the workers in a certain trade may

be insured in a trade sick club embracing all its members throughout the empire; these correspond somewhat to the trade unions. Factories, mines, and other undertakings employing over 50 workpeople may form their own sick club. 2. Municipal sick clubs, to include all those not insured in one of the above kind of clubs.

The various sick clubs are self-governing, but are under control and inspection of the Government authorities. Employers and employees participate in the management, and both parties have to contribute; one-third of the amount levied has to be paid by the employer and the remaining two-thirds are contributed by the insured person. The total contribution may not exceed 4 per cent. of the member's wages. To take a concrete example. A workman employed in a factory with a sick club levying 3½ per cent. is earning 30*s.* a week. He will have to contribute two-thirds of the total amount levied (1*s.* 1½*d.*)—i.e., 9*d.*, and his employer 4½*d.*, a week. It may be mentioned that every sick club is compelled to possess a reserve fund representing the total annual expenditure based on an average of three years' expenses. This fund is entrusted to the authorities who have to take charge of its administration.

In case of illness of a member, the sick club has to defray all the costs of medical attendance, medicines, trusses, spectacles, &c., or of any special treatment required; for instance, a member may be sent to undergo a course of baths at some well-known resort at the club's expense. These benefits are granted for a period not exceeding 26 weeks, after which time, if the person is still incapacitated for work, the provisions of the invalidity insurance are enforced. During this time the patient may undergo treatment in a hospital, or failing this he receives sick pay from the third day of falling ill, corresponding to half his wages, but not exceeding 3*s.* a day. If the member is compelled to undergo treatment in a hospital, those dependent upon his wages for their maintenance receive half the amount he would be otherwise entitled to as sick pay. In case of death 20 times his average daily wage is paid out. Female members are entitled to full sick pay for six weeks after childbirth. The above represent the minimum that sick clubs are legally compelled to do for their members, but those in a flourishing financial condition are free to extend the scope of the benefits conferred, which usually take the form of granting free medical treatment to the uninsured dependents of the members or increase of sick pay.

### *The Relations of German Sick Clubs and the Medical Profession.*

In order to be in a position to confer these more tangible benefits, other forms of expenditure are as far as possible cut down to the lowest figure, and this is the point upon which the interests of the medical profession and those of the sick clubs diverge. It is, in fact, the predominant question at issue to-day for the German medical man to resist the autocratic desires of the clubs, and in this respect their organisation can point to some notable successes in resisting the many attempts made to render the practitioner subservient to the wishes of the sick clubs. The clubs' aim is to introduce what may be called the "tied doctor" system, whereas the profession, and to a certain extent the members, maintain that the insured should be free to choose their medical attendant from among the whole number of those who agree to the sick clubs' terms.

It cannot be denied that the fact that some millions, who formerly postponed calling in medical attendance until the last moment, are now able to do so without having to consider the question of fees, had a material influence on the position of the medical profession. Soon, however, it became evident that the slight remuneration agreed to, mainly on the ground that it meant an assured source of income to the practitioner, was in no adequate relation to the services rendered, and led to insistance upon a fairer recompense for work and skill. It must be remembered that in most of the German States there exists a legal minimum and maximum scale of fees for professional duties. The Prussian medical tariff enumerates no less than 163 different items covering medical attendance and surgical operations of various degrees. These charges are applicable in the absence of any special agreement; the minimum charges are to be made in the case of members of charitable or State institutions, otherwise the fee is to be reckoned within the limits stated, according to the time or skill required and financial position of the patients.

The following may serve as an example of the rate of remuneration thus established:—

*Some Items in the Prussian Medical Tariff.*

| | |
|---|---|
| First visit to a patient | 2*s.* to 20*s.* |
| Every further visit | 1*s.* ,, 10*s.* |
| First consultation at medical man's house | 1*s.* ,, 10*s.* |
| Every further consultation | 1*s.* ,, 5*s.* |
| (These charges include full examination and writing out a prescription.) | |
| A consultation over the telephone | 1*s.* ,, 3*s.* |
| Consultation of two or more medical men, to each | 5*s.* ,, 30*s.* |
| (Visits or consultations between 9 P.M. and 7 A.M. twice to three times the above rates.) | |
| Subcutaneous injections, enemata, injections into the urethra | 1*s.* ,, 3*s.* |
| (The first three times full charge, afterwards only half, but not under 1*s.*) | |
| Opening a superficial abscess | 2*s.* ,, 1 *s* |
| First simple dressing of a small wound | 1*s.* ,, 10*s.* |
| Resection of a rib | 20*s.* ,, 150*s.* |
| Operations on the internal organs of the abdomen | 60*s.* ,, 500*s.* |
| Sight-testing | 3*s.* ,, 15*s.* |
| Removal of foreign bodies from the eye | 2*s.* ,, 20*s.* |
| Assistance at a normal birth | 10*s.* ,, 40*s.* |
| If over two hours, for every half-hour or part | 1*s.* 6*d.* ,, 3*s.* |
| Birth requiring the use of instruments | 15*s.* ,, 150*s.* |
| The last item is: Examination of a wet-nurse | 3*s.* ,, 10*s.* |

The most usual form of contract between a sick club and a medical man is that the club sets aside a sum ranging from 3*s.* to 6*s.* per member per annum for medical attendance, and this amount is paid in full to the medical man. Sick clubs which extend medical attendance to other members of the family of the insured allow twice to three times this amount. Where several medical men participate, the total amount is divided amongst them in a variety of ways. One is that the whole sum is handed over to the local medical association, which undertakes its division among the sick club medical men, or the services rendered are divided into various classes, each being allotted a certain number of points, and the single medical man receiving his share according to the total number of points he has to his credit. Other sick clubs pay in full the lowest charges of the tariff, or have a contract whereby a 10 to 20 per cent. rebate is deducted from these charges. Another system which is adopted by the sick club of one of Germany's leading chemical works is, that every half year each member of the club is called upon to choose his medical attendant for the ensuing six months from among about a dozen who have placed their services at its disposal. In this case the 3*s.* per unmarried and 12*s.* per married man are paid in full to the practitioner thus chosen. It may be mentioned that it is the aim of the German medical organisation to obtain remuneration for services rendered to sick club patients according to the lowest charges of the tariff, and this resolution forms part of its working programme.

In considering the above conditions it must not be forgotten that dispensing is forbidden to medical men and is a monopoly of the pharmacists. On the other hand, every prescription has to be charged for according to the provisions of the Imperial Medicine Tariff, which sets forth in detail the amount to be levied for each single constituent according to the exact amount prescribed; further, certain charges for the various manipulations in compounding a prescription, and, lastly, the price of the bottles, &c., is also fixed, the total arrived at being the amount charged to the patient. In certain German States the Government requires the pharmacist to grant a rebate (10 to 15 per cent.) on all prescriptions for sick club patients. No prescription may be repeated on a sick club's account unless it bears the medical man's signature and date on each repetition.

In view of the trend of political aspirations to-day, it is interesting to note that the nationalisation of the medical and pharmaceutical service figures on the programme of the German Social Democratic party, which contends that every citizen has a right to free medical attendance at the cost of the State; and this proposal has even been discussed in some of the State Parliaments.

### *Methods Adopted by the Sick Clubs to Cut Down Medical Expenditure.*

It is a regrettable fact, however, that the introduction of so beneficial a measure as compulsory insurance against sickness, backed by the assistance extended to the dependents upon the sick man during his incapacity for work—a high moral

factor for every wage-earner, should have been followed by serious divergences of opinion between the authorities of the organisations and the members of the medical profession. In their endeavour to afford the insured the greatest possible benefits the sick clubs have, so far as the medical man is concerned, consistently closed their consciences to the precept of "live and let live." By every possible means they strive to reduce the expenditure relating to medical attendance. In fact, they go so far as to dictate what the practitioner may and may not prescribe for members. This is effected by means of a list enumerating certain more expensive drugs, wines, mineral waters, &c., which must either be replaced by less costly preparations, or permission to prescribe them must be obtained from the club committee. Again, a collection of formulæ has been elaborated calculated to meet general cases and costing as little as possible. In liniments, for instance, olive oil is replaced by rape-seed oil; instead of vaseline or lanoline, lard is to be used as an ointment base. This mania for saving goes so far as to exclude the use of divided powders. The medical man has to prescribe the full quantity, and the directions read: "Take as much as will go on the point of a knife." In the case of potent drugs the danger of so inaccurate a method of dosage is apparent. Simple solutions of salts are also banned: 10 grammes of potassium iodide are prescribed, and the patient has to dissolve this in a wine bottle full of water. The bottles, ointment-pots, &c., have to be returned to the pharmacy, otherwise they are charged to the member himself. The above instance but a few of the restrictions imposed to obviate "unnecessary" expense to the clubs.

"Forewarned is forearmed," and the British practitioner would do well to consider the experiences of his Continental colleagues so as to be in a position to safeguard his interests on the introduction of social measures nearly affecting his material position in his own country.

## BRISTOL AND THE WESTERN COUNTIES.

(FROM OUR OWN CORRESPONDENTS.)

*The University of Bristol.*

THE winter session opened on Oct. 3rd without any definite ceremony. The graduation ceremony is reserved for Oct. 20th, and the new wing is to be formally opened by Lord Winterstoke on Nov. 15th. This wing, it will be remembered, provides new quarters for the departments of chemistry and physiology. The removal of the latter from its somewhat cramped quarters in the medical building leaves space for other departments, and has made possible a very considerable extension of the students' room by destruction of the wall which separated the original room from the medicine lecture theatre and fusion of the two rooms in one. The old physiology lecture theatre will be available for medicine and surgery, and one of the old physiological laboratories is devoted to dental mechanics. It was hoped that the wing would be ready for use at the beginning of the session; but in spite of strenuous efforts on the part of the builders much remains to be done. Another important addition to the University has to be recorded. The two theological colleges, the Western College and the Baptist College, are to be regarded as an institution in association with the University, arrangements having been made for the recognition of the teaching staff as members of the teaching staff of the University. To this end an advisory committee has been formed with the Vice-Chancellor as convener. The Western College is housed in a very good new building close to the University, and the Baptist College is about to be rebuilt on a site separated only by a road from the new wing of the University. On Oct. 8th a students' reception was held in the large hall of the University, at the invitation of Sir Isambard and Lady Owen. Each faculty had a table decorated in a distinctive colour, and bows of corresponding colours were served out for students to wear. As each student also wore a piece of paper bearing his name a method of automatic and general introduction was secured.

*Decrease of Vaccination in the West of England.*

Vaccination in the West of England has been falling off very considerably, especially in the urban districts, and the experience of the Cirencester (Gloucestershire) board of guardians is fairly applicable to most of the unions in the West. The returns recently issued by this board show that whilst in the rural districts the number of exemptions had remained practically stationary, in the urban districts the number had now increased to such an extent that they were equivalent to one-half of the total number of births.

*Poor-law Treatment of Consumptives.*

At a recent meeting of the Bristol board of guardians the hospital committee reported in favour of the establishment of a sanatorium for the treatment of early and advanced cases of phthisis in men, women, and children, and spoke of a property within reach of Bristol, in the Somersetshire hills, which might be acquired for that purpose. Boards of guardians have adopted a similar course in Liverpool, Bradford, Newport, and elsewhere; and the present accommodation in Bristol is unsatisfactory. There is a great deal to be done at Southmead before it can be considered an efficient sanatorium; and the committee feels that as such changes are necessary and must be shortly undertaken it would be better policy to start an altogether new institution where the treatment would be more efficient and where consumptives would be segregated from those whom they might otherwise infect. The committee's calculations show that such a plan would be as economical in the long run as a patching scheme. The whole matter was postponed for fuller discussion and examination.

*The Bristol City Infectious Hospitals.*

The typhoid carrier who is being kept under observation at the Ham Green Fever Hospital has troubled the minds of certain members of the Bristol health committee, who object to the expenditure of public funds in maintaining a patient for what they consider to be the gratification of scientific curiosity. Fortunately, the medical officer of health, Dr. D. S. Davies, was able to assure them that the investigations were likely to yield results of practical value. At the same meeting it was proposed and decided to spend about £5000 in extending the accommodation for infectious disease by adding buildings to the Novers Hospital. This will bring the number of beds nearer to the Local Government Board standard, of which the present total falls short.

*Control of the Tuberculous Poor.*

The Plymouth board of guardians has been seeking the support of various boards of guardians in the West of England for approval of a resolution asking the Government to give authority to the guardians to detain in the workhouse infirmary all persons suffering from tubercular phthisis who are in receipt of outdoor relief. The proposal does not seem to have met with much support; the St. Thomas' (Exeter) board allowed the letter "to lie on the table," one of the members remarking that the suggestion would mean a great hardship on the poor.

*The Exeter District Nursing Association.*

The nurses' home in connexion with the newly-formed District Nursing Association was formally opened on Sept. 29th by the Mayor of Exeter in the presence of a large gathering, which included Mr. H. Duke, K.C., M.P., Colonel Cardew, and Dr. H. Davy. The association employs a head-nurse and two assistant nurses, who commenced their duties on Oct. 3rd. It is estimated that an annual income of about £300 will be required to carry out the working of the undertaking. The cost of furnishing, &c., will be probably £250, making a total of £550. Of this sum £420 have been obtained, leaving £130 still to be raised.

*Veterinary Surgeons and Armorial Bearings.*

At Barnstaple, on Oct. 6th, a local veterinary surgeon was summoned by the Devon county council for using armorial bearings without a licence. For the defence it was contended that the crest was that of the Royal College of Veterinary Surgeons and that the members of that college had a right to use the college arms on notepaper, billheads, &c., when used for only professional purposes. The bench of magistrates eventually dismissed the case and allowed the defendant costs and also the advocate's fee.

*Proposed Medical Officer of Health for Cornwall.*

At a meeting of the Contagious Diseases (Animals), Sanitary, Housing and Town Planning Act Committee of the Cornwall county council held at Truro on Oct. 6th, under the presidency of the Hon. John Boscawen, it was unanimously decided to recommend the county council to appoint

a medical officer of health for the county of Cornwall, at a salary of £400 per annum, rising to £500 by yearly increments of £25.

*Bristol's Memorial to King Edward VII.*

After long deliberation it has been determined by the Lord Mayor and his committee to erect an equestrian statue of King Edward VII. in front of the Victoria Rooms, Clifton, using the opportunity for the acquisition of ground at present surrounded by unsightly railings, and in the future to be used for some kind of open space. This is a much-needed improvement, but some disappointment is felt by those who had hoped that the King's memory would be perpetuated by means of a central hospital fund such as exists in London.

*The late Mr. R. G. Worger of Radstock (Somerset).*

Two stained-glass windows were dedicated in the chancel of the parish church of Radstock on Oct. 2nd, which have been erected as memorials to the late Mr. Richard George Worger, L.R.C.P. Lond., M.R.C.S. Eng., L.S.A. One window contained a representation of St. Luke, "the beloved physician," and was erected by subscriptions from the inhabitants of Radstock. The other was emblematic of a Red Cross Knight, and was given by the deceased's comrades in the 2nd South-Western Mounted Brigade Field Ambulance, R.A.M.C. (T.F.), in which Mr. Worger held the rank of surgeon-captain. Mr. Worger, of whom an obituary notice appeared in THE LANCET, died on July 10th last. He was extremely popular in Radstock, took a great interest in the social and religious life of the town, and was for several years churchwarden of the parish church.

Oct. 10th.

## MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

*Infantile Mortality.*

WHATEVER may be thought of the use of bribery in the form of prizes for the mothers who have succeeded in rearing their children as far as the completion of their first year, there is no doubt of the philanthropic motives that have inspired Mr. Alderman Broadbent of Huddersfield in his crusade against the unnecessary loss of infant life which disgraces many parts of our country. Warrington has had a high infant death-rate, and the public conscience has been roused to do something towards its reduction. A public meeting, held under the auspices of the Warrington Guild of Help, was very successful, 2000 people being present. Alderman Broadbent was the principal speaker. Dr. Joseph, the deputy chairman of the health committee, gave the movement the sanction of the municipal council, saying that the council would welcome the assistance of the Guild of Help. A letter was read from the Bishop of Liverpool, saying that the "infantile mortality was a disgrace to our civilisation and our Christianity, and he was thankful that the question was being discussed by the citizens of Warrington in public." The town council has adopted a report of the health committee submitting a scheme by the medical officer, involving the appointment of two lady inspectors and the acceptance of voluntary assistance, probably of lady members of the "Citizens' Guild of Help." The scheme thus sketched out bears much resemblance to that which has been productive of so much good among the poorer part of the population of Manchester. Help in poverty will, as was said long ago, always be needed, but that the amazing ignorance among the poor, which is one of the chief causes of the high death-rate among infants, should exist in these days, after the long years in which compulsory education has had free play, is of itself eloquent proof of the non-practical character of the teaching which has gone by the name of education. There are some signs of improvement as to this, and perhaps we may hope that those who rule in these matters may allow common-sense a more prominent place in the scheme of education.

*"Christian Science."*

The striking case of what may almost be called death by "Christian Science" that took place at Urmston, and to which your medico-legal correspondent referred last week, shows how utterly irrational are these fanatics. The facts are probably fairly well known. A man, aged 53, became lame three years ago, and as he gradually became worse he saw Dr. J. Clegg at Urmston, and was advised to see Dr. A. H. Burgess, who advised him to have the leg amputated. In his evidence at the inquest the son said his father had a horror of operations, and was also a Christian Scientist. Dr. Clegg was dismissed, and a Mr. Pitfield, a Christian Scientist practitioner, was called in. Dr. Clegg said that if the leg had been amputated a good recovery might have been looked forward to. Mr. Pitfield, whose only occupation seems to be that of a Christian Science practitioner, said the patient asked him if he would help him with Christian Science, so he prayed with him, read the Scriptures and the Christian Science text-book, "Science and Health," but no treatment was given to the leg. In answer to the coroner as to the failure of his treatment he answered, "I cannot say it was a failure." The coroner did not agree with this, and the jury seemed to wish to return a verdict of manslaughter, but the coroner told them the only verdict they could give was "Death from septic poisoning," and as Mr. Statham had acted on his own responsibility they could not add a rider. The coroner made some strong remarks on the conduct of Mr. Pitfield. A letter has appeared in the *Manchester City News* which illustrates the strange character of what presumably stands for reasoning. He objects to an article in a local paper headed a "Christian Science Victim," and says it is not easy to see why it should not be a "Medical Science Victim." "To be sure, he was offered the chance of an operation, a mere chance of life, as the doctor very fairly admitted. ..... But surgery is not healing, and a grave operation with a chance of success cannot be the true scientific healing," and so on. One Sunday night at a Roman Catholic church in Manchester Father Day delivered a trenchant and scathing attack on the principles of the so-called Christian Science, saying that the text-books read like the ravings of a madman. It seems as if this delusion were spreading, and it might be well for the clergy of all denominations to warn their flocks against the absurd doctrines of Christian Science.

*The Salford Guardians and Hope Hospital.*

It may be remembered that some time ago the Salford guardians were unfortunate enough to come under the ban of the medical profession as regards an appointment at the Hope Hospital, which is under their control. They are now at cross purposes with the Local Government Board as to the appointment of a medical officer to the hospital. To their surprise, their choice of a local practitioner for the appointment of medical officer was not accepted by the Local Government Board, which intimated, in a letter read at the meeting of the guardians held on Oct. 7th, that it still "did not feel able to assent to the appointment proposed by the guardians." The feathers of the guardians were naturally ruffled somewhat, but a lady guardian moved that they should advertise the position again, and said that if the decision of the Local Government Board had been accepted at first it would have saved the guardians from an embarrassing position. This was seconded by another lady. The chairman of the Hope Hospital committee proposed an amendment which was somewhat militant, "declaring the proposed appointment the best that could be made in the interests of the poor in that institution," and he protested against "the usurpation of the rights of the guardians by any London authority." A valiant stroke for self-government. This was backed up by the chairman, who said "it was a battle between public representatives and the red tape of central officialdom." One reverend gentleman thought the central authority should be respected. However, the amendment was carried against the sweet reasonableness of the ladies, and the guardians remain at "loggerheads," as it is called in Salford, with the Local Government Board as to this very important appointment. At present the duties are carried out by a locum-tenent at a stipend of 6 guineas a week.

*"Spotted Fever" in Cheshire.*

It was reported from Macclesfield yesterday that a case of spotted fever had occurred there in a boy 11 years old. It is said that he had been in the Macclesfield Infirmary for some days under treatment for meningitis, when it was suspected that he was suffering from spotted fever. On

Friday last a sample of fluid was sent to the Lister Institute, and on Saturday the boy was removed to the isolation hospital, and yesterday the medical officer, Mr. J. H. Marsh, received a provisional diagnosis of spotted fever. It is not known how the boy came by the disease.

Oct. 11th

## LEEDS.

(FROM OUR OWN CORRESPONDENT.)

*Opening of the Medical Session.*

THE classes in the Faculty of Medicine of the University of Leeds were resumed on Oct. 4th, when Professor F. Howard Marsh, the Master of Downing College, Cambridge, and professor of surgery in that university, distributed the prizes and delivered an introductory address (see p. 1119). There was a good attendance of the staff, of the students, and of the general public, and the proceedings were presided over by the Vice-Chancellor. The main part of the address dealt with the vexed and largely discussed question of the curriculum and the amount of time that could be devoted, under the existing arrangements, to actual clinical work. The University of Leeds has recently made certain alterations in the curriculum which have secured, at the expense of some concentration of the time devoted to the earlier subjects but without it is hoped sacrificing their interests, an increase in the length of time devoted to the more purely professional subjects. And as in these the number of systematic lectures has been diminished the time of the students which can be devoted to clinical work will be increased. Professor Marsh's remarks on this score therefore may be regarded as confirming the wisdom of the alterations referred to. A very interesting part of the address was that in which he gave some details of the life and work of William Hey, the founder of the school, whom he deemed worthy to be mentioned along with Cooper, Hunter, and Lister. Following the custom of many years, the annual dinner of the medical profession of Leeds and district was held at the Queen's Hotel on the same day that the session was opened, when Professor Marsh was the chief guest, the chair being taken by Professor R. Lawford Knaggs.

*Lyddon Hall: Students' Residential Chambers.*

Owing to the death of Mr. G. Herbert Rowe a vacancy has arisen in the wardenship of this residential hall. Professor Jamieson, who has lately been appointed to the chair of Anatomy, has been approached in the matter and has consented to undertake the duties. Lyddon Hall is pleasantly situated within convenient distance of the medical school and the other University buildings, and was at one time the residence of Sir Clifford Allbutt. Professor and Mrs. Jamieson are very cordially wished every success in their undertaking.

*Alarming Fire at the General Infirmary.*

On the morning of Oct. 7th there was a serious outbreak of fire at the General Infirmary, which was happily confined to the upper wards of one block and was unattended by loss of life or disaster of any kind. The block affected was the most recently built of those occupied by patients, and was opened 18 years ago. It is composed of three storeys with front and back wards in each, connected with one another by a local administrative portion in which there are some small wards with access from a main staircase and occupying mezzanine floors. The three storeys are connected with the rest of the building, on the ground floor by a covered way, on the first floor by a gangway, with the main corridors of the infirmary, and on the top storey by a bridge with the terrace. It is noteworthy that this last connexion was made only a few years ago on the suggestion of the late Mr. W. H. Brown. On this occasion it is true that its non-existence would not have determined a catastrophe, but its presence greatly facilitated the removal of the children who occupied the top storey. The fire was first detected by a passer-by, and on the prompt arrival of the firemen its site was found to be in the false roof. The nurses who were on duty got the first alarm from the firemen, and at once set about removing all the patients. Promptly other nurses, porters, servants, and members of the resident staff were at work, and in a few minutes, without panic or hurry, all the patients were removed to various places of safety, and practically all the furniture of the wards was removed. Though, as the chairman of the board said in his official statement, the complete safety of the inmates was never for a moment in doubt, the rapid removal of some 90 patients was a creditable performance, and it left a clear field for the fire brigade to fight the matter out. The roof of the building was burnt and in great part fell in, but the fire was confined to the top storey, and was got under in about two hours. Kindly offers of assistance were at once forthcoming from several of the neighbouring institutions, but it was not found necessary to accept these. The date of discharge of a good many of the patients in the semi-convalescent hospitals was anticipated, and some of the patients found accommodation there. One of the large wards had just been completely overhauled and was to have been occupied in a week; this was at once got ready and provided space for 28 patients. Some others found accommodation in various parts of the building, and with the exception of the closing of the out-patient department on the afternoon of the fire there was no interruption to the work of the infirmary.

Oct. 10th.

## SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

*Edinburgh Royal Infirmary: The Nurses' Prize-giving.*

AT the nurses' prize-giving in the Edinburgh Royal Infirmary on Oct. 7th the prizes were distributed by Lord Ampthill. Lord Provost Brown presided over the gathering, which was held in the nurses' recreation-room in the infirmary. Lord Ampthill, after the presentation of the prizes, addressed the nurses, speaking in terms of high appreciation regarding the work done by the nursing profession. He went on to urge the advantages of a system of registration for nurses, maintaining that for the sake of both the public and the large body of fully trained nurses the sanction and the protection of the law through the method of registration were necessary. Mrs. George Kerr, one of the managers of the infirmary, referred to the resignation of Miss Bell on her appointment as matron in Melbourne, and expressed regret that the infirmary was to lose her services. Mr. Walter B. Blaikie, in moving a vote of thanks to Lord Ampthill, referred to various recent improvements in the conditions under which the nurses worked. A new nurses' home had been added to the institution, the dining-room accommodation had been increased, and an improved pension scheme had been instituted.

*Dundee Medical Appointments.*

Dr. John Logie, a graduate of the University of Edinburgh, has been appointed resident medical assistant to the Dundee Royal Infirmary. Dr. Logie took honours in most of his classes. The Dundee school board on Oct. 4th appointed Dr. A. B. MacArthur Thomson, Barking, Essex, as assistant medical officer at a salary of £250. Dr. Thomson graduated at the University of Edinburgh eight years ago. He obtained the D.P.H. of London this year.

*Hostel for Senior Medical Students at Glasgow.*

A residency or hostel is to be opened near the University and Western Infirmary on Monday, Oct. 17th. The hostel is at 9, University-avenue, and is in telephonic communication with the Western Infirmary, so that the students can be communicated with and get the advantage of seeing urgent medical and surgical cases, and in this way add to their practical experience. The charge for residence in the hostel will be £1 1*s.* per week.

*Aberdeen City Poorhouse Medical Officership.*

The time for receiving applications for the medical officership at the Aberdeen city poorhouse has expired, but no application for the post has been received. The matter will now come before a meeting of the Aberdeen parish council on Oct. 11th. It will be remembered that when first the post was advertised the salary offered was only £75. The local medical men contended that this was not a fair salary and that at least £150 should be given. The council then offered £105, but, as stated above, no application has been received.

*The University of Aberdeen: Changes in the Staff.*

The following changes have occurred in the Aberdeen University medical staff: Experimental Physiology: John

Elrick Kesson, M.B., to be lecturer. Forensic Medicine: David Rennet, M.D., D.P.H., to be lecturer. Anatomy: Norman James Calder, M.A., M.B., to be assistant. Materia Medica: Walter James Dilling, M.B., to be assistant. Pathology (Special): James Watt, M.A., M.B., to be assistant. Surgery: G. H. Colt, F.R.C.S., to be assistant.

*Aberdeen Branch of the Red Cross Society.*

A meeting was held of the Aberdeen Branch of the Red Cross Society on Oct. 4th, following the large one of the previous week. Lady Aberdeen again presided, and a leaflet prepared by her, explaining the methods to be followed in the organisation of the County of Aberdeen Branch and in the formation of classes throughout the county, was carefully gone into. Lady Aberdeen undertook to have copies of the leaflet circulated through the county, and it is hoped that it will be the means of creating interest in the movement. A form of standing orders was also gone over and approved, and the appointments made at the last meeting were confirmed. The movement will be now advanced by the vice-presidents, under the direction of the divisional presidents, having classes and voluntary aid detachments formed in their district. The fee for membership is £1 1*s.*, and for associateship 5*s.*

*Gift of Portraits of Emeritus Regius Professor A. Ogston, University of Aberdeen.*

At a meeting of the Aberdeen University Court on Oct. 4th, Professor George Adam Smith presiding, a letter from Dr. J. Mackenzie Booth was read, asking on behalf of the committee the court's acceptance of the portrait of Emeritus Professor Ogston to the University of Aberdeen. The portrait to be presented to Professor Ogston himself will be presented at the same time and place—namely, the afternoon of Oct. 14th in the Portrait Gallery of Marischal College, the court having signified its pride and great pleasure in accepting the portrait to be presented to the University. On the occasion Professor Matthew Hay will accept the portrait for the University, owing to the unavoidable absence of the principal. These portraits have been subscribed for by medical graduates throughout the world, and painted by Mr. Fiddes Watt, A.R.S.A.

Oct. 11th.

## IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

*The Health of Dublin.*

Sir Charles Cameron, medical officer of health of Dublin, has issued his annual report on the health of the city and on the sanitary work performed in 1909. The delay in its appearance is due to a cause that everyone regrets—the recent severe illness of its author. He urges on the corporation the necessity of new enactments which would tend to bring the standard of public health as nearly as possible up to that of English cities. It may reasonably be asked why the corporation does not make full use of the powers it has before asking for more? The dirty condition, even of the principal streets of Dublin, is proverbial.

*Health of Waterford.*

The public health of the city of Waterford has been for some time so unsatisfactory that the Local Government Board has at length ordered an inquiry into the sanitary conditions of the city to be held by two of the inspectors of the Board. In the letter to the corporation announcing this intention the Local Government Board points out that the death-rate from all causes in the past three years has amounted respectively to 21·7, 21·3, and 19·1 per 1000, while the death-rate from the principal epidemic diseases has for the same period reached the high figures of 2·2, 3·1, and 2·4 per 1000—a record unapproached by any of the important town districts in Ireland. The corporation is very indignant at the inquiry being held.

*Presentation to Sir George O'Farrell.*

Last week the members of the Irish Lunacy Service presented an address to Sir George Plunkett O'Farrell, who has recently retired from the position of Inspector of Lunatics. The address is to be followed by a portrait. The esteem in which Sir George O'Farrell is held was shown by the fact that nearly all the medical superintendents of Irish asylums attended in Dublin to take part in the presentation.

*Sudden Death of Mr. P. J. Fagan.*

It was with much surprise and sorrow that his professional friends heard of the death of Mr. P. J. Fagan, surgeon to St. Vincent's Hospital. Mr. Fagan complained of pain in his chest on Sunday night last, but on Monday he went about his usual work. On Monday evening, however, he was seized with angina pectoris and died in a few moments. Besides being surgeon to St. Vincent's Hospital, Mr. Fagan was for many years an active member of the staff of the Catholic University School of Medicine in the departments of physics and anatomy, and since the establishment of University College he has been chief demonstrator of anatomy. He was only 46 years of age, and he leaves a widow and three young children.

*Charles Magill, M.D. R.U.I.*

It is with sincere regret I announce the death of one of the best-known Ulster practitioners at his residence, Lisburn, which occurred on Oct. 5th, suddenly, from Bright's disease, which assumed a very serious condition on Oct. 4th, when uræmic convulsions set in, followed by heart failure. Dr. Magill belonged to Dundrod, county Antrim, being the son of a well-known clergyman, the Rev. W. Magill, whose congregation was in that district. After a successful career at Queen's College, Belfast, he graduated M.D. and M.Ch. of the Royal University in 1879, and became L.M. R.C.P. Irel. in the same year. For a short time he was house surgeon in the Belfast union hospital; he afterwards practised for a time in Crumlin, but in 1882 he removed to Lisburn, where he rapidly built up a good practice. He was medical officer of the local district of the Great Northern Railway and the Ulster Provincial (Friends') School. A man of an extremely genial disposition, he was much esteemed by his patients as well as by the general public. He leaves a wife and two children—a boy and girl—for whom sincere sympathy is felt. Dr. Magill, who was 52 years of age, was buried in Lisburn.

*What Ailed the Pig?*

At the Portadown petty sessions on Oct. 10th a farmer was summoned for exposing for sale in the Portadown pork market the carcass of a diseased pig which was alleged to be unwholesome and unfit for food. Mr. J. L. Rowlett, medical officer of health, and Mr. R. W. Thompson, veterinary surgeon, said that the pig was suffering from tuberculosis, and that in their opinion the carcass was not fit for human food. Dr. R. J. Rowlette, lecturer in pathology at Queen's College, Galway, and pathologist to the Steevens and Rotunda hospitals, said that he found tubercle bacilli in the glands of the animal and that the portions of the carcass submitted to him were infected with tuberculous disease. For the defence, Mr. J. McAleer, veterinary surgeon, stated that he examined the pig and formed the opinion that it was fit for the food of man, and he would not have condemned it. Dr. F. McDonald said that the pig was not suffering from tuberculous disease. It was a sound, healthy pig, fit for the food of man, and it was not suffering from any disease. Professor E. J. McWeeney said that he could not find any traces of tuberculous disease in the portions of the carcass submitted to him. He found no tubercle bacilli in the tissues. He was distinctly against all kinds of alarmist rumours that would result in good carcasses of meat being condemned because a small portion of the carcass might bear evidence of disease. He was then asked to explain the following passage from the report of the Royal Commission on Tuberculosis: "In view of the greater tendency of generalisation of tuberculosis in the pig, we consider that the presence of tubercular deposits in any degree should involve seizure of the whole carcass and organs," and in reply Professor McWeeney said that was not exactly infallible, and men who had interested themselves in this question were entitled to their own opinions. He quite accepted Dr. Rowlette's statement that he found tubercle bacilli in the specimen sent him, but he (Professor McWeeney) failed to find them in what he examined. The case was dismissed, but the town council of Portadown, it is said, will appeal.

Oct. 11th.

## PARIS.

(FROM OUR OWN CORRESPONDENT.)

*Organic Compounds of Antimony and Arsenic in the Treatment of Trypanosomiasis.*

AT a meeting of the Academy of Sciences held on Sept. 26th M. Laveran made a communication on the treatment of trypanosomiasis with organic compounds of antimony and arsenic. He said that M. Yvon, after preparing a mixture of the emetic compound of antimony and aniline with the emetic compound of arsenic and aniline, had by crystallisation obtained from it fine hexahedral crystals of a pale violet colour containing both antimony and arsenic. M. Laveran had made trials of this substance on guinea-pigs infected with Trypanosoma evansi, Trypanosoma gambiense, Trypanosoma dimorphon, and Trypanosoma congolense. It was employed in a watery solution of 2 per cent. strength, which was injected into the muscles of the thigh in the following quantities: For guinea-pigs of 500 grammes, a dose of 0·01 gramme; for guinea-pigs of 600 grammes, a dose of 0·0125 gramme; and for guinea-pigs of 700 grammes, a dose of 0·015 gramme. The treatment was not commenced until the trypanosomata were fairly abundant in the blood of the animals; five injections were given at intervals of four or five days; as a rule they did not produce any ill-effects, but in some instances there was severe inflammation without suppuration. Recovery was considered to have taken place when the blood of the animals remained free from trypanosomata for three months, and this condition was fulfilled by 15 of the guinea-pigs which had been infected with the four species of trypanosoma already mentioned. In 11 of these animals recovery took place after a single course of treatment consisting of five injections; in 4 cases there was a relapse, followed by recovery after a second course of treatment. It was not yet possible to say whether the new preparation would be serviceable in sleeping sickness. There was some reason to fear that injections of it into the muscles of the human subject would prove too irritating, and that intravenous injections might be necessary, which would be a serious objection. It has, however, been found that an injection of it into the muscles of a monkey's thigh did not cause any inflammatory reaction and did not seem to be painful.

*Conference on Cancer.*

As already mentioned in this column, the International Conference on Cancer met in Paris on Oct. 1st. The inaugural addresses and other preliminary business occupied the forenoon of that day, and in the afternoon there was a discussion on the histology and histological diagnosis of cancer. Professor Czerny of Heidelberg was in the chair. Professor von Hansemann, speaking in German, proposed the appointment of a commission composed of all the foreign delegates for the purpose of drawing up an international nomenclature for use in connexion with cancer, this nomenclature to be submitted to the conference which would be held in three years' time. Professor Delbet drew attention to the inconveniences resulting from the fact that in different countries identical lesions received dissimilar names and the same words were often used in different senses. M. Pierre Nadal said that in the present state of our knowledge it was impossible to make a complete classification of cancers. M. Poziawecki expressed the opinion that the word cancer should be discarded and that its place should be taken by the adjective cancerous, which would be applied to the malignant forms of various tumours. Professor P. Marie spoke in favour of the proposal made by Professor von Hansemann, as well as on the utility of preserving documents for future use; he said that Professor Delbet had, in conjunction with M. Ménétrier and M. Herrenschmidt, compiled a nomenclature which, although it might not be complete, was a useful contribution to pathological terminology. The second subject on the official programme was the histogenesis of cancer. It was introduced by M. Brault and M. Faroy, who said that cancer when considered with reference to its histogenesis appeared to be a deviation from the laws of normal development, and from the principles which governed the maintenance, the renewal, and the repair of the tissues, but it was impossible to say exactly what was the active agent in this metamorphosis. M. Ledoux-Lebard introduced the subject of statistics. He recommended the adoption of uniform and comparable methods, the use of inquiry sheets presenting similar features but with some variations, and the formation of an international commission on the statistics of cancer. Dr. Carl Otto of Copenhagen, in discussing the duration of cancerous diseases of the digestive organs, gave some particulars of 196 cases which had been followed from the commencement of the disease until death, all of them having been examined post mortem. He said that the commencement of the disease and the appearance of the first symptom were in general not simultaneous but the latent stage was disregarded. On Oct. 3rd the meeting took place in the amphitheatre of Professor Delbet in the Hôpital Necker. Professor Kortewez and Professor Delbet spoke on the subject of the surgical treatment of cancer and M. Rovsing on the general treatment of cancer. Professor Marie and M. Clunet discussed the action of the X rays on malignant tumours. Professor Segond presented a report on fulguration in the treatment of cancer, his conclusions being generally unfavourable. M. Vidal of Algiers described various forms of serum treatment which have been proposed for malignant tumours. M. Récamier of Paris dealt with the subject of assistance for cancerous patients. In the subsequent meetings Dr. Weinberg delivered an address on the hæmodiagnosis of cancer, and Professor Winter, speaking on the subjects of post-graduate medical instruction and the education of the public, said that increased knowledge would in the course of time enable operations for cancer to be performed in an early stage of the disease.

*Cholera in Marseilles.*

A party of emigrants coming from the Piræus in the *Bosphore* recently arrived in Marseilles, where they stayed at a hotel, and two days afterwards several of them fell ill. Three who presented all the symptoms of cholera were isolated, and two of these patients have died. The remainder of the party was then removed to the lazaret at Frioul.

Oct. 11th.

## VIENNA.

(FROM OUR OWN CORRESPONDENT.)

*Death of Professor Chrobak.*

Professor Chrobak, the well-known professor of obstetrics and gynæcology in the University of Vienna, died a few days ago after a prolonged illness. This famous surgeon was really a self-made man who by his great abilities and knowledge obtained the position of the most esteemed and influential director of the clinic in the general hospital. He was born in 1840, and on graduating as M.D. took up the study of diseases of women, in which subject there was at that time hardly any teaching. He soon became *privat-docent* in his specialty, and was appointed professor in 1880. His principal published works are the "Text-book on Diseases of Women"; the gynæcological part of Stricker's "Text-book of Histology"; and the section on "Gynæcology" in Nothnagel's treatise. He did much towards the introduction of gynæcological wards in the smaller hospitals, and the present system of instruction of students in diseases of women is chiefly due to his endeavours, as is also the teaching of midwives. His final exertions were devoted to the construction of the new gynæcological clinics which he knew he would not take over as illness had incapacitated him for active work; the modern up-to-date design of these buildings is chiefly due to his ideas. In 1908 he resigned his post in favour, as he said, of his favourite pupil, Professor von Rosthorn, who died so suddenly only a few months ago. Another of his early pupils is Professor Wertheim, who succeeded Professor von Rosthorn and is well known as the originator of a radical method of operation for cancer of the uterus. Professor Chrobak's kind and thoughtful way of dealing with patients was known everywhere, and his motto, *Primum non nocere*, was not only impressed upon all his pupils, but was visible in every operating theatre and ward of his clinic.

*International Congress on Physiology.*

The Eighth International Congress of Physiology took place in Vienna from Sept. 27th to Oct. 1st. The president

of the Congress was Professor Exner, and the Government, as well as the municipality of this city, gave a hearty reception to the Congress. After the usual preliminary addresses of welcome delivered by the President and the representatives of the State, the city, and scientific corporations, Professor Richet, speaking in French, delivered the introductory discourse, taking for his subject "Humoral Teaching in Physiology." He explained how the old theory of the "humours" of the animal body had regained its importance by the researches of modern physiology, which showed how the presence of "humours" of special substances in the liquid form were responsible for many conditions of life or death. The meetings took place partly in the University and partly in the physiological laboratory of the Institute for Anatomy and Physiology. Numerous papers were read, some of the more important among them being as follows. Professor Tshikawa of Japan read a paper on the Changes in the Protoplasm of Amœba under the Influence of Narcotics and Asphyxia. He showed that the protoplasm differentiated itself into two parts, a change which, however, did not occur if the toxic substance was removed. A paper which excited much interest on account of the recent development of flying machines was read by von Wendt of Helsingfors on Metabolism at High Altitudes. He found that nitrogen was retained in the tissues and that medium altitudes increased the formation of hæmoglobin and red corpuscles, whilst the higher altitudes increased the muscular development in a greater degree. Professor Hensen of Kiel read a paper on the Methods of Examination of Plankton, the "blood of the ocean," for which purpose he has constructed various ingenious forms of apparatus. The old problem of diabetes was taken up by Dr. Boruttau of Berlin, who has found that the heart of mammals contained glycogen, and that a change of diet caused also a change of the percentage of glycogen. He said that diabetic patients had lost in variable degrees the ability to utilise all ingested carbohydrates and albumin. Dr. Reach's experiments showed that after removing nearly all the pancreas ingestion of raw meat caused sugar to appear in the urine in dogs. Professor Kreidl of Vienna and Professor Kinoshita of Japan have studied the phenomena of the electric discharges which occurred in the Torpedo marmorata when it was placed in water free from salt. Under this condition rapid discharges occurred, until the electric organ was exhausted, which required about 30 minutes. The animals regained their electric potency quickly when returned to the sea, and could be "discharged" several times without harm. Cocaine and chloralhydrate, even in very small doses, immediately stopped the electric discharge in water free from salt, whilst the administration of strychnine caused electric discharges even in sea-water. Professor W. M. Bayliss of London gave details of his experiments on the osmotic pressure of colloids. Professor Stirling also selected a theme of general physiological interest, whilst the problems connected with thermopenetration were discussed by Dr. Ullmann and Dr. Berndt. Quite a special part of the proceedings was devoted to the electro-cardiogram, and the correctness was shown of the opinion of Zbyszewski that the electro-cardiogram was an indicator of the currents in the cardiac muscles, the preponderence of the left ventricle in this respect being clearly manifested. Dr. Prizbram demonstrated the method adopted by him to ensure a constant or variable climate for his biological experiments at temperatures advancing by successive differences of 5° C. up to 40°; at the same time the animal could be placed under varying conditions of humidity, colour, and light. Dr. Kammerer showed animals which had inherited differences of colour and other bodily qualities from the parents under modified conditions of life. The exact measurement of the resistance of air in the nasal passages was demonstrated by Professor Gärtner. One of the most notable papers was a commemoration by Dr. von Ebner of the centenary of Schwann. The fundamental discovery by that eminent physiologist of the cellular structure of the living animal organism has been the basis on which modern scientific research in medicine has been made possible. With regard to the sight-seeing part of the programme, mention must be made of two events—namely, a visit to the Vienna Biological Experimental Institute, where much work of a most interesting nature is being done in a quiet way, and the unveiling of a statue of Gregor Mendel, the famous priest, who discovered the laws named after him, the Mendelian laws of heredity. He was a native of Brünn, in Austria, where a monument to him has been erected by a number of his followers, and an official deputation from the Congress was present at the unveiling ceremony.

Oct. 10th.

## NOTES FROM INDIA.

(FROM OUR OWN CORRESPONDENTS.)

*Plague.*

THE plague returns for the week ending Sept. 3rd show 1770 deaths for all India as compared with 1325 in the week preceding. The provincial figures are: Bombay Presidency, 857 deaths; the Central Provinces, 248; the United Provinces, 104; Bengal, 85; and Madras, 73. Hyderabad State returns 141 deaths; Mysore State, 90; and Rajputana and Ajmer Merwara, 133.

*Beri-beri in India.*

A report by Major A. Hooton, I.M.S., on the first biennial meeting of the Far Eastern Association of Tropical Medicine at Manila has recently been published. The portion of it of most interest to India relates to beri-beri. The discussion on this disease centred on an admirable paper by Dr. H. Fraser and Dr. A. T. Stanton of the Institute for Medical Research of the Federated Malay States, and a communication from Dr. H. C. Highet, the chief medical officer of Siam, which in essentials tended to support the conclusion arrived at in that paper. Following up the suggestion of Dr. J. Braddon that beri-beri is connected with the consumption of over-milled or white, as contrasted with under-milled, rice, a series of experiments was carried out at the institute on fowls, the result of which, stated briefly, was that a large proportion of those fed on over-milled rice alone developed polyneuritis, while all those fed on partially husked *padi*, or under-milled rice, containing a certain amount of the polishing removed in the cleaning process, remained healthy. Practical measures were taken in various outbreaks of beri-beri by both Dr. Fraser and Dr. Highet on the lines suggested by these experiments, and previously by Dr. Braddon, with the best results, and they quoted a large number of cases in which the disease had disappeared almost immediately on the substitution of a less completely polished for a white rice diet. The conclusions arrived at by Dr. Fraser were that beri-beri is a disorder of nutrition and usually associated with a diet in which white rice is the principal constituent, and that the disease, as it appears in the Federated Malay States, can be prevented by substituting for white rice a rice which has been less perfectly polished, or by the addition to a white rice diet of the polishing which has been removed from it, or other articles rich in those substances which have been shown by analysis to be lacking in white rice. The evidence brought forward appears convincing. It was accepted also by the great majority of the members present, and, in fact, the conclusion seems to be justified that whatever the ultimate cause of the disease may prove to be, its prevention, under by far the most common conditions, has now passed beyond the stage of theory.

*Native Regimental Hospitals.*

A committee, comprising Surgeon-General C. P. Lukis, Director-General of the Indian Medical Service, as president, Lieutenant-Colonel W. A. Morris, R.A.M.C., Lieutenant-Colonel C. M. Moore, I.M.S., and Major Jay Gould, I.M.S., as members, with Major Bruce Seton, I.M.S., as secretary, is at present sitting in Simla to consider the possible conversion of the present regimental hospital system of the Indian Medical Service into a station hospital system, somewhat on the lines of that existing in the case of the British army.

*Infant Mortality amongst Natives in the United Provinces.*

As a result of the question raised at the Naini Tal Sanitary Conference with regard to the possibility of diminishing infant mortality, special inquiries have lately been set on foot in the United Provinces with a view to establishing the undoubted results to definite causes. About a year ago a systematic investigation was begun at Cawnpore at Government expense into the reasons of extensive mortality among infants under one year of age, and for a period of six months, running into the beginning of the present year, a

lady doctor and two trained *dhais* were appointed to assist in the work. The inquiry has up to the present shown that infant mortality in the United Provinces, as elsewhere in India, is largely due to tetanus or other septic disease already appreciable at childbirth. Tetanus is the most prolific source of infant mortality amongst natives in India, and its prevalence is in very large measure traced to the prejudices of untrained attendants engaged in obstetric work, whose crude and unhygienic methods of treatment afford every opportunity to the tetanus germ. It is found that through this agency infection by the specific bacillus of tetanus is brought about with appalling frequency. In nearly every case this infection proves fatal, and it has now been established to satisfaction that the so-called convulsions which carry off so many infants within a few days of birth are purely manifestations of the disease in question.

Sept. 10th.

# Obituary.

## CECIL HUNTINGTON LEAF, M.B., B.C. CANTAB., F.R.C.S. ENG.,

SURGEON, CANCER HOSPITAL, BROMPTON; SURGEON, GORDON HOSPITAL FOR DISEASES OF THE RECTUM.

WE regret to announce the death of Mr. Cecil Leaf, which occurred at Eastbourne on Oct. 5th at the early age of 46 and which removes from among us one of the ablest among our younger surgeons and one who perhaps hardly received the recognition due to his attainments.

Cecil Leaf was the son of the late Mr. Frederick Leaf, a member of the well-known commercial firm of Messrs. Leaf and Co., and was born in 1864. He received his early education at Marlborough and Trinity College, Cambridge, at both of which places he excelled at cricket and racquets. On leaving college he became a student at the London Hospital, and in 1890 obtained the double qualification of the English Conjoint Board, graduating also in medicine at his University. At the London Hospital he held all the house appointments, being house surgeon, house physician, ophthalmic assistant, as well as demonstrator of anatomy in the medical school. In 1895 he proceeded to the Fellowship of the Royal College of Surgeons of England, and it was confidently expected by many of his friends that his industry and talent would secure him a place upon the surgical staff of the London Hospital, to which he was deeply attached. He was not, however, so fortunate as to obtain the appointment, and his failure, which he accepted in very good spirit, led to his taking up the work of a special rather than a general surgeon. He became surgeon to the Gordon Hospital for Fistula, where he had already done some clinical work, and to the Cancer Hospital, where his sound anatomical work at the London Hospital stood him in good stead in the line of research that he adopted. This line he soon made clear to his colleagues, for in 1898 he published a work on the "Surgical Anatomy of the Lymphatic Glands," which aimed at giving by a series of well-executed diagrams the position of the chief groups of these structures. With few exceptions, all the diagrams were original, and the book filled a real gap in systematic instruction. The average student when dissecting ignores utterly all lymphatic glands and lymphatics, and examining bodies have largely refrained in anatomy tests from asking questions on the positions of lymphatic glands and vessels, possibly out of sympathy with the certain ignorance of the candidates. But when the student commences his clinical work he finds the lymphatic system of great importance, and, as we said in our review, Leaf's small book supplies just the information that he wants.

Much of his later literary performance was a development of his earliest work. He translated and edited "The Lymphatics," a section of the monumental French *Anatomie Humaine* written in the original by Dr. Gabriel Delamare, Professor P. Poirier, and Professor B. Cunéo, discharging the task with great accuracy. In the same year, that is, in 1904, he published a small book entitled "The Clinical Causes of Cancer of the Breast and its Prevention, with Analyses of 100 Cases," in which he took a wide view of malignant conditions generally, being unwilling to attribute cancer in all parts of the body necessarily to the same cause. He suggested as of principal etiological importance in cancer of the breast errors of lactation, injury, anxiety, and a tuberculous history, coming to the general conclusion that cancer of the breast is almost invariably due to a combination of causes. He made numerous contributions to the literature of malignant disease and disease of the rectum to our columns and those of our contemporaries, among which may be mentioned an article in THE LANCET on the relation of blood-vessels to lymphatic vessels in which the interesting observations added to our knowledge of the connexion between the lymphatic and blood vascular systems. Cases of such connexion have been recorded by Stenson, Meckel, and others, the veins into which the lymphatics directly opened being the venæ cavæ, the portal, renal, axillary, internal iliac, and the azygos veins. Leaf gave further examples of this connexion and showed that a direct communication existed between the small arteries in the thorax and the lymphatic vessels in that region, although the connexion is not so free as between the lymphatics and the veins.

Always methodical and hard-working, he made full use, as will be seen by this brief record, of his opportunities, and we hope that a book on cancer of the breast, which was nearly completed when his last illness laid him aside, will be published by the kind offices of his many friends. Retiring and modest, "John" Leaf, as he was affectionately called by his contemporaries, was transparently honest, upright, and the pattern of a really good man, and his death will come as a shock to his numerous friends, for he was at work as recently as August last. It was due to lymphadenoma for which he had been operated upon in June, 1909. After this he thought himself well until this summer, when a recurrence occurred and the disease progressed extremely rapidly. He leaves a widow and one daughter. The funeral took place last Saturday at Barnes.

## WALTER DUNCAN THOMAS, M.B. LOND., M.R.C.S. ENG., L.S.A.

WE regret to learn the sudden death of Dr. Walter Duncan Thomas of Bundaberg, Queensland, and formerly of Llanelly, South Wales. Apparently in his usual health on August 23rd at 11 P.M., he was found by his wife sitting in his chair, dead, at 7 A.M. on the 24th. He was in his fifty-fourth year.

Dr. Thomas was well known as a young man at Llanelly, his native place, where his father, and subsequently his eldest brother, carried on for 50 years the leading practice. Educated at Epsom College, where he became a prefect and was awarded by his schoolfellows the Hodgkin and Wakley prize, he matriculated at the London University, and subsequently became a medical student at St. Bartholomew's Hospital, London. There he took the M.R.C.S. Eng. in 1879 and in 1881 the degree of M.B. at the London University. When a boy at school he had a very severe attack of acute rheumatism which affected his heart. The knowledge of this influenced him in deciding to settle in a warm climate. After making several voyages as surgeon to the Peninsular and Oriental Steam Navigation Company Dr. Thomas started practice in partnership with Dr. May, an old Bartholomew's man, at Bundaberg in 1884. He was very successful in practice and was greatly beloved by all who knew him. In 1885 he married a daughter of the late Mr. Robert Little of Brisbane, one of the leading solicitors of Queensland. Two of his three sons survive him.

The Bundaberg *Daily News*, writing of Dr. Thomas, says: "Possessed of a nature essentially retiring, yet so generously stamped with those virtues which make for true nobility, the kindliest of feeling entwined itself around his fine personality. The last of men to seek for popularity, his nature was none the less so essentially honourable, so emphatically generous, so uniformly courteous and considerate for all around and about him, that a sense of high personal esteem and deep regard represented the only human channel of thought that could adequately convey the sentiment of his friends and acquaintances towards him. The soul of honour himself, he knew no other standard of measurement for those with whom in friendly, social, or professional life he came in contact. Small wonder, therefore, that the news of the death of a citizen so widely and so genuinely esteemed should come as a shock to the community, and the news was rendered additionally distressing because of the suddenness with which it was flashed upon the people."

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Rudolf Chrobak, who was until about

three years ago professor of midwifery and gynæcology and director of the "Second" Obstetric Clinic in the University of Vienna.—Dr. R. Amory, formerly lecturer in physiology in Harvard University.—Dr. Robert A. Jamieson, formerly professor of materia medica in the Detroit College of Medicine.—Dr. André Obrzut, professor of pathological anatomy in the University of Lemberg.

# Medical News.

EXAMINING BOARD IN ENGLAND BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS OF ENGLAND.—At the Second Professional Examination in Anatomy and Physiology, held on Sept. 29th and 30th, and Oct. 3rd and 4th, 85 candidates presented themselves, of whom 56 per cent. were approved (including one lady—Miss Maysie Alice Marianne Collie, Otago University) and 44 per cent. were rejected. The following are the names of the successful candidates:—

Stephen Grange Askey, B.A. Cantab., Cambridge University and St. Thomas's Hospital; Charles Sydney Atkin, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Claude Hamilton Blair Avarne, London Hospital; Stanley Samuel Beare, Middlesex Hospital; Frank Percy Bennett, St. Mary's Hospital; Edward Albert Brock, St. Bartholomew's Hospital; Percy Patrick Butler, University College; Andrew John Chillingworth, Middlesex and St. Bartholomew's Hospitals; William King Churchouse, Charing Cross Hospital; Frank Collar, Guy's Hospital; Maysie Alice Marianne Collie, Otago University; Sidney Barron Depree, St. Mary's Hospital; Hubert Roy Dive, St. Bartholomew's Hospital; George Cranston Fairchild, B.A. Cantab., Cambridge University; John Reginald Keith Fenning, London Hospital; Arthur Griffith-Williams, Cambridge University and London Hospital; Haji Sulaiman Gulamhussein Haji, L.M.S. Bombay, Grant Medical College, Bombay; Robert John Harley-Mason, Middlesex Hospital; Arthur Ernest Williams Idris, University College; Thomas Herbert Williams Idris, Middlesex Hospital and University College; George Gerald Jack, Middlesex Hospital; David William Jones, Kenneth John Taylor Kear, Reginald Hutchinson Lucas, and William Kellock McKay, Guy's Hospital; Oscar Gladstone Maginness, St. Bartholomew's Hospital; Edward Hillis Marshall, King's College; Reginald Victor Martin, St. Mary's Hospital; Arthur Wellington Matthew, London Hospital; Kavasji Cursetji Mulla-Firoze, L.M.S. Bombay, Grant Medical College, Bombay; Henry Barton Owens, London Hospital; John Hayward Paget, Charing Cross Hospital; William Percivall Penhale, Middlesex Hospital; Claude Hollingworth Philips, London Hospital; William Piper, Westminster Hospital and King's College; Francis Charles Robbs, St. Mary's Hospital; George Marsden Roberts, St. Bartholomew's Hospital; Granville Douglas Robertson, St. Mary's Hospital; Anthony Wellesley Monckton Sawyer, University College; Bernard Edward Patrick Sayers, Middlesex Hospital; Kenneth Vickerman Smith, Charing Cross Hospital; Thomas Victor Somerville, London Hospital; William Collis Spackman, Birmingham University; Mackenzie Thwaites Wills Steedman, B.A. Cantab., Cambridge University; Harman Taylor, Manchester University; Horatio Thomas, B.Sc. Lond., University College, Cardiff; Charles Alexander Weller, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; and Cecil William Wilson, London Hospital.

At the First Professional Examination, held on Sept. 27th, 28th, 29th, and 30th, the following candidates were approved in the undermentioned subjects:—

*Chemistry and Physics.*—Errington Atkinson, Percival Cheal, and George Stanley Deane, London Hospital; Gloster Tyndall Garraway and George Harris Haines, University College; Brabazon James Hallowes, St. Bartholomew's Hospital; Jagan Nath Puri, London Hospital; Gordon Stuart Terry, Bristol University; and Karl Johan Fredrik Westman, Brighton Technical College.

*Chemistry.*—Kanshi Ram Batra, University College; Joseph Herbert Bayley, London Hospital; Oliver St. Leger Campion, Dulwich College; Cyril James Gozney Exley, Leeds University; Moustafa Fahmy, London Hospital; Lancelot Horsley, Birkbeck College; Ernest Gwyn Howell, University College, Cardiff; James Stuart Leslie and Alexander Joseph Vincent McDonnell, London Hospital; Arthur Rennie Muir, University College, Cardiff; Mian Mohammad Shafi, London Hospital; Ramon Romero Sy-Quia, London Hospital and City of London College.

*Physics.*—John Behesnilian, Charing Cross Hospital; Robert Edmund Barry Denny, London Hospital; Frederick Ernest Feilden, Middlesex Hospital; Luis Hernando Garces, London Hospital; Henry Judson Grimshaw, Liverpool University; and Herbert Henry Silley, King's College.

*Biology.*—John Andrew, South-Western Polytechnic; Wilfred Angel Easton, Guy's Hospital; Samuel Mallinick, Halle University and London Hospital; (Miss) Lily Fanny Pain, Royal Free Hospital; David John Platts, King's College; Jagan Nath Puri, London Hospital; Bryan Montague Tuke, Middlesex Hospital; and Karl Johan Fredrik Westman, Brighton Technical College.

At the quarterly examination in Practical Pharmacy held on Oct. 6th the following gentlemen were approved:—

Arthur Brodie Hamilton Bridges, St. Thomas's Hospital; Stacey Archer Burn, St. Bartholomew's Hospital; Roderick Ernest Clarke, King's College Hospital; Edward Robert Cecil Cooke, B.A. Cantab., Cambridge and Sheffield Universities; William Lewis Cowardin, St. Mary's Hospital; Edward Percy Drabble, London Hospital; Harry Dudley, University College; Philip Cuthbert Collingwood Fenwick, St. Thomas's Hospital; Alfred George Timbrell Fisher, Bristol University and St. Bartholomew's Hospital; Andrew Alexander Fyffe, Sheffield University; Alfred Linton Gardner, Guy's Hospital; Ernest Richard Gordon Greville, St. Thomas's Hospital; Frank Mainwaring Hughes, London Hospital and private study; Samuel Hutchinson, University College Hospital; Anthony Kennedy, B.A. Cambridge, Cambridge University, and Middlesex Hospital; Claude Jocelyn Delabere May, Bristol University; Douglas Duncan Malpas, Middlesex Hospital; Herbert Henry Powys Morton, King's College Hospital; Henry Maurice Peacock, L.D.S. Eng., private study; Edmund Uniacke Russell, King's College Hospital; Henry Wakeman Scott, B.A. Cantab., Cambridge University and St. Bartholomew's Hospital; Gerald Nicholson Stathers, Cambridge University and St. Bartholomew's Hospital; William Vere Taylor Styles, Middlesex Hospital; Cedric Norman Vaisey, Bristol University; Percival Dillon Warburton, Sheffield University; James Anderson Watson, Otago University and Middlesex Hospital; Kim Gien Wee, St. Thomas's Hospital; and William Neville Pennant Williams, Liverpool University and private study.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At the Preliminary Science Examination for the Licence in Dental Surgery, held on Sept. 27th, 29th, and 30th, the following gentlemen were approved:—

*Chemistry and Physics.*—Norman Mulliner, Liverpool University; Charles Justin O'Callaghan, Charing Cross Hospital; and John Stanley Palmer, Birkbeck College.

*Chemistry.*—Philip Blake and Robert Campbell, Charing Cross Hospital; Oliver Nettleton Dadley, Municipal School, Gloucester; and Harold John Stickland, Birkbeck College.

*Physics.*—Herbert Howard Cooke, Wandsworth Technical Institute; and Walter Alexander Crane, Liverpool University.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held recently the following candidates passed in the subjects indicated:—

*Biology and Chemistry.*—W. Fox, Charing Cross Hospital.

*Materia Medica and Pharmacy.*—J. E. S. Sheppard-Jones, St. Thomas's Hospital.

*Anatomy.*—A. Barry, London Hospital; H. H. Fairfax, Charing Cross Hospital; and G. L. Lawlor and R. V. Martin, St. Mary's Hospital.

*Physiology.*—A. Barry, London Hospital; J. F. Bourke, Glasgow; and A. E. Bullock, G. L. Lawlor, and R. V. Martin, St. Mary's Hospital.

UNIVERSITY OF GLASGOW.—The following have satisfied the examiners in the fourth (final) professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.):—

Mary Alexander, M.A., Robert Richmond Archibald, M.A., B.Sc., John Atkinson, Robert Blackie Austin, James Alexander Stewart Burges, Thomas Simpson Campbell, B.Sc., Robert Hunter Deans, Louisa Emma Dodge, Peter Drummond, William Deanburn Dunlop, Andrew Scobie Findlay, Thomas Scott Forrest, Alexander Fraser, Nicolas Gebbie, John Gray, Archibald Campbell Haddow, John Reid Haldane, William Hamilton, James Hendry, M.A., B.Sc., James Jack, James Macallan, Donald Christopher Macdonald, Alastair Macintyre, Balfour M'Kean, John Gladstone Mackenzie, Thomas Jones Mackie, Andrew Bruce MacLean, William Alexander MacLennan, Alexander Thomson M'Whirter, Frank Needham Marsh, Campbell Lamont Miller, M.A., Andrew Ross Muir, Clark Nicholson, M.A., John Paterson, Thomas Paterson, Richard Reid Kirkwood Paton, John Penman, James Francis Quigley, Rutherglen, Daniel Wright Ritchie, John Ivison Russell, Margaret Elizabeth Rutherfurd, Florence Elizabeth Sexton, James David Speid Sinclair, Gilbert Innes Strachan, John Norman Macdonald Sutherland, William Oswald Taylor, Stephen Veitch Telfer, and Henry Yellowlees.

The following passed with distinction in the subjects indicated:—

In (*a*) Surgery and Clinical Surgery, (*b*) Practice of Medicine and Clinical Medicine; Thomas Jones Mackie. In Surgery and Clinical Surgery: Robert Hunter Deans and Andrew Ross Muir. In Midwifery: James Hendry, M.A., B.Sc., James Jack, Donald Christopher Macdonald and Balfour M'Kean.

FOREIGN UNIVERSITY INTELLIGENCE.—*Breslau:* Dr. Carl Prausnitz, who has been doing bacteriological work in London, has been appointed Assistant in the University Institute of Hygiene with special charge of the section for the Treatment of Rabies.—*Catania:* Dr. Francesco Francariglia has been promoted to the Professorship of Ophthalmology. Dr. Francesco Caruso has been appointed Extraordinary Professor of Midwifery and Gynæcology.—*Clausenberg:* Dr. F. Veress has been recognised as *privat-docent* of Dermatology.—*Copenhagen:* A new Royal Hospital has recently been opened containing 40 wards. There are also four new university institutes—viz., the Pathological Anatomy Institute under Professor Fibiger, the Pharmacological Institute under Professor Bock, the Pharmaceutical Institute under Professor Pontopidan, and the General Pathology Institute under Professor Salomonsen.—*Erlangen:* Dr. Robert Heinz, *privat-docent* of Pharmacology, has been promoted to an Extraordinary Professorship.—*Florence:* Dr. Cesare Frugone has been recognised as *privat-docent* of Medical Pathology, Dr. Giuseppe Zironi as *privat-docent* of

Surgical Pathology, and Dr. Carlo Francioni as *privat-docent* of Pædiatry.—*Freiburg:* Dr. Karl Hegar, *privat-docent* of Midwifery and Gynæcology, has been granted the title of Extraordinary Professor.—*Genoa:* Dr. Attilio Catterina, Extraordinary Professor of Operative Medicine, has been promoted to the Ordinary Professorship.—*Göttingen:* Dr. W. Heubner, Extraordinary Professor of Pharmacology, has been promoted to the Ordinary Professorship.—*Greifswald:* Dr. Fritz König of Altona has been offered the chair of Surgery vacated by Professor Payr, who is going to Königsberg.—*Innsbruck:* Dr. Fritz Pregl, Extraordinary Professor in the University of Gratz, has been appointed to the chair of Medical Chemistry, in succession to Dr. Löbisch, resigned.—*Königsberg:* Dr. Payr of Greifswald has been appointed to the chair of Surgery in succession to Dr. Lexer, who is going to Jena.—*Marburg:* Dr. P. Ostmann has been promoted to an Honorary Professorship of Otology.—*Modena:* Dr. Carlo Ferrai has been promoted to the chair of Forensic Medicine.—*Munich:* Dr. A. Schmincke of Würzburg has been recognised as *privat-docent* of Anatomy.—*New Orleans (Tulane University):* Dr. Robert P. Bean has been appointed Adjunct Professor of Anatomy.—*Padua:* Dr. Arturo Carraro has been recognised as *privat-docent* of General Pathology, Dr. Rodolfo Vigliani as *privat-docent* of External Pathology, and Dr. Enrico Ronzani as *privat-docent* of Hygiene and Sanitation.—*Pisa:* Dr. E. Arman has been recognised as *privat-docent* of Dermatology.—*Prague (German University):* Dr. Hans Rubirtius has been recognised as *privat-docent* of Surgery.—*Rome:* Dr. Achille Capogrossi has been recognised as *privat-docent* of Medical Pathology, Dr. Gustavo Modena as *privat-docent* of Neurology and Psychiatry, and Dr. Antonino del Piano as *privat-docent* of Pædiatry.—*Sassari:* Dr. Mario Pelagatti has been promoted to the Ordinary Professorship of Dermatology.—*St. Petersburg (Women's Medical Institute):* Dr. Shirshoff, of the Military Medical Academy, has been appointed Professor of Midwifery and Gynæcology.—*Vienna:* Dr. Friedrich Dimmer of Gratz has now accepted the chair of Ophthalmology, which at first he declined.

ST. THOMAS'S HOSPITAL MEDICAL SCHOOL.—The following were the winners of scholarships at this school: University Scholarship: Michael Joseph Petty, Downing College, Cambridge. Preliminary Science Scholarships: 1st, A. L. Blunt, St. Thomas's Hospital Medical School; 2nd, C. O. H. Jones, Technical Institute, Walthamstow. Merchant Taylors' Scholarship: Cyril George Learoyd.

DONATIONS AND BEQUESTS.—In response to the appeal which was made in July last Mr. Otto Beit has promised a gift of £5000 to complete the amount needed for the erection of the Children's Sanatorium (Consumptive Children) at Holt, Norfolk.—Among other large bequests the late Mr. W. Bell of Bootle has left £1000 to each of the following institutions: the Bootle Borough Hospital; the David Lewis Northern Hospital, Liverpool; the Royal Southern Hospital, Liverpool; the Stanley Hospital, Kirkdale, Liverpool; the Liverpool Royal Infirmary; and the Liverpool Blind Asylum. He also left £1000 to the Liverpool University.

THE SALE OF POISONS.—At the Eastbourne county court on Oct. 6th the Pharmaceutical Society was successful in recovering in two distinct cases the penalty of £5 for a breach of the Poisons and Pharmacy Act, 1908. On behalf of the society a purchase was made at a shop at Eastbourne, where the business of a seedsman and florist is carried on, of a bottle of XL All Insecticide. The sale was made by a lady assistant. The proprietor of the shop holds a licence under the local authority, but the assistant did not. In the other case a Hailsham defendent sold a poison used for fumigating purposes in a bottle which did not bear the necessary labels. It was held for the defence that it was an error of an assistant, but Judge Scully, in giving judgment for the Pharmaceutical Society, said "these little mistakes would occur." The Poisons and Pharmacy, 1908, came into force on April 1st, 1909. It provides better safeguards than heretofore existed against the sale of poisons used for medicinal purposes, and extends the facilities for obtaining poisonous compounds used in horticulture and agriculture. In connexion with the latter class of poisons there are, of course, certain regulations which must be complied with as a precautionary measure, so that, in so far as it is possible, deaths from accidental poisoning may be avoided. And the importance of these regulations can be gauged from the fact that in the case of the XL All Insecticide the particular bottle sold at Eastbourne contained sufficient to poison 70 persons, while in the other case the fumigating material contained no fewer than 300 poisonous doses.

DAWLISH COTTAGE HOSPITAL.—Mrs. Nosworthy of Dawlish has given £1000 to the funds of the local cottage hospital. Mrs. Nosworthy gave a similar sum to the institution in 1907.

AT the last meeting of the Buckfastleigh (Devon) urban district council the resignation was accepted with very much regret of Mr. Henry Ubsdell, M.R.C.S. Eng., L.S.A., who has been medical officer of health for the past 35 years.

LONDON HOSPITAL MEDICAL COLLEGE.—The following entrance scholarships have been awarded:—Price Entrance Scholarship in Science (value £120), A. C. Perry. Entrance Science Scholarship (value £60), P. C. Cloake. Entrance Science Scholarship (value £35), S. Batchelor. Epsom Scholarship (value £126), J. N. Deacon. Price Scholarship in Anatomy and Physiology (University Scholarship, value £60), H. H. Mathias (King's College, Cambridge).

UNIVERSITY OF LONDON.—The pass-list of the September matriculation examination of this University shows that 99 students were successful in the first division and 273 in the second division. The results of the June matriculation examination for the colonies show that 12 candidates from Ceylon have passed, 9 from Newfoundland, 2 from Queensland, 2 from Penang, and 1 each from British Guiana, Antigua, Seychelles, and Barbados.

MEDICAL TREATMENT OF LONDON SCHOOL CHILDREN.—The London County Council on Oct. 11th approved arrangements with the Poplar Hospital for Accidents and a local committee in Deptford for the dental treatment of school children as recommended by the Education Committee before the summer recess. The proposal to renew the experimental scheme for the treatment by the "Queen's" nurses of children suffering from suppurating ears in the Paddington instead of the Hackney district was approved. The Finance Committee remarked that the apparent failure of this experiment in two districts raised the question of the general efficacy of the policy, and as to this the Education Committee had been asked to give further particulars.

THE FEES OF DISTRICT MEDICAL OFFICERS: DISCUSSION AT THE METROPOLITAN WATER BOARD.—At its meeting on Oct. 7th the Metropolitan Water Board had under consideration a report presented by the works and stores committee dealing with the regulations governing the duties of district medical officers in the Board's service. The committee, it was stated, had carefully investigated the operation of these regulations so far as they affected the fees to be paid for attendance in cases of accidents to the Board's workmen whilst on duty. As a result of its deliberations the committee recommended that the fee to be paid in accident cases should be 3*s.* 6*d.* in respect of each attendance, except in special and serious surgical cases, in which a higher fee might be justified. In the latter event the Board's chief medical officer should be entrusted with the duty of considering the charges made by the district medical officer, and advising whether such fees were reasonable. Dr. R. M. Beaton (L.C.C.) objected to the method in which the proposed alterations had been presented to the Board. A copy of the regulations should have been circulated amongst the members so that they might have had an opportunity of studying the question, which was intimately connected with the health of the Board's workmen. If the matter were not pressing he hoped the chairman of the committee would consent to postpone it for a month, and in the meantime circulate the regulations. Mr. C. E. Hearson (Camberwell Borough Council) (chairman of the committee) hoped Dr. Beaton would not press his request, because there was nothing hidden behind the committee's report. It referred almost entirely to regulations which had been previously passed by the Board, and the committee had only arranged them in consecutive order, so that they constituted more readable matter for medical men. The only difference that was being made was in regulating the fee for surgical

cases. A subcommittee had carefully considered the whole question with the assistance of the Board's chief medical officer, Dr. R. J. Collie, and it was only in cases where there had been a very serious accident, which required more work than usual, that Dr. Collie would be invited to consider what was a fair fee. The committee's object had been to regulate the charges in surgical cases. In medical cases the fees had been previously passed by the Board and no change was proposed. Dr. Beaton said he entertained no doubt that the question had been carefully considered, and the work was probably well done, but the committee had no right to present to the Board mere strips of information, which they were expected to accept without comment, and when no other facility for investigation than that a member interested should be compelled to ask for a copy of the new regulations. It was against that he protested, and not against the wisdom of the regulations. Mr. Hearson expressed his willingness to defer the whole matter if that were the pleasure of the Board, but repeated that it was only in connexion with the fees for serious accidents that Dr. Collie would be consulted, in case any excessive charge were made by the district medical officer. The fee of 3*s.* 6*d.* for each attendance would be paid in all ordinary cases. The chairman of the Board intimated that the question had been very fully considered in committee for many hours, and was only presented to the Board for formal approval. Dr. Beaton thereupon withdrew his request for postponement, and the committee's recommendation was agreed to.

SOCIETY OF OFFICERS OF "INFANT CONSULTATIONS."—A meeting was held in the summer at the Marylebone Dispensary, 77, Welbeck-street, London, W., to consider the advisability of starting a society consisting of those interested in the work of "infant consultations." The following resolutions were put to the meeting and carried unanimously, subject to amendment at the general meeting to be held on Oct. 19th at 6 P.M. :—

1. That a Society of Officers of "Infant Consultations" be and is hereby constituted.
2. And that the aim and object of such society be to: (*a*) Bring into closer relationship all those engaged or interested in the work of such institutions. (*b*) To promote the establishment of similar institutions and to advise as to their organisation. (*c*) From time to time to hold meetings for the reading of papers and the holding of discussions on subjects germane to the work of "infant consultations." (*d*) For the recording of experience gained by individuals engaged in the work. (*e*) For the collection of literature, statistics, and reports bearing on the subject.
3. That the society consist of a president, vice-president, honorary secretaries, treasurer, librarian, and ordinary members.
4. That the expenses of the society be defrayed by an annual subscription of 2*s.* 6*d.*

An executive committee has already been formed. All communications should be addressed to the honorary secretaries, Dr. H. Ronald Carter, 11, Leonard-place, Kensington, London, W., and Dr. J. Lane-Claypon, 69, Prince of Wales Mansions, Battersea Park, London, S.W.

APPOINTMENT OF ASSISTANT TO THE LIVERPOOL MEDICAL OFFICER OF HEALTH: A NEW DEPARTURE.—Dr. W. L. Hawksley has been recently appointed by the health committee of the Liverpool city council to the new post of assistant medical officer, with special reference to dealing with tuberculosis. There were a large number of applicants, 58 in all, many of them possessing the highest qualifications. It so fell out that there was no better candidate than a local one, Dr. W. L. Hawksley, whose claims lay in the fact that he had held appointments in the David Lewis Northern Hospital and the Liverpool South Dispensary, from which latter institution he was transferred to take charge of the special tuberculosis wards of the corporation at Fazakerley Hospital. After nearly two years' experience there he was appointed one of the school medical officers. In all these posts he had worked well, and these circumstances led to his well-deserved promotion. The duties of the new assistant to Dr. E. W. Hope (medical officer of health) are to visit the homes of persons suffering from tuberculosis who have been in-patients at Fazakerley Hospital or notified under the order of the Local Government Board, with a view to ascertain that medical instructions are being followed and to remind or advise the patient when necessary, as to the precautions to be observed. He will be required to note and report to the medical officer of health any home conditions likely to influence the disease, either in regard to the patient or to those living with him or her. He will also be required to keep systematic records of visits or re-visits and of the conditions found, and to submit them to the medical officer of health, and to carry out any other kindred duty or investigation which the health committee may direct.

A CASE of cholera, presumably cholera nostras, has proved fatal at the Royal Free Hospital.

NOTTINGHAM MEDICO-CHIRURGICAL SOCIETY.—The inaugural address, "Le Rheumatisme Tuberculeux" of Poncet of Lyons, will be delivered by Dr. H. Alexis Thomson on Oct. 19th, at 64, St. James's-street, at 8.30 P.M.

THE annual dinner of the Westminster Hospital and Medical School took place on Thursday, Oct. 6th, at the Imperial Restaurant. Mr. W. Vaux Graham, vice-chairman of the hospital, presided. A large number of past and present Westminster men attended, and a most enjoyable evening was spent. The dean reported favourably on the present condition of the school.

ROYAL INSTITUTE OF PUBLIC HEALTH.—The council has decided to admit two medical practitioners possessing the Diploma in Public Health gratuitously for a period of six months each in order to afford them the opportunity for a more extended experience in bacteriological methods. Applications should be forwarded to the Principal, 37, Russell-square, W.C.

THE ROYAL EYE HOSPITAL, ST. GEORGE'S CIRCUS, SOUTHWARK.—At the School of Ophthalmic Surgery and Medicine, connected with this institution, on Friday, Oct. 21st, at 5.15 P.M., a lecture will be given by Mr. J. Stroud Hosford, F.R.C.S. Edin., assistant surgeon to the hospital and assistant ophthalmic surgeon to the Temperance Hospital, London. The subject of the lecture will be "Some Points in the Diagnosis of Orbital Disease."

ROYAL SANITARY INSTITUTE CONGRESS, BRIGHTON.—The sanitary committee of the Brighton town council has placed on record its appreciation of the valuable services rendered to the town by Dr. Duncan Forbes, medical officer of health, as honorary secretary of the local committee entrusted with the arrangements for the successful congress of the Royal Sanitary Institute held at Brighton in September.

CENTRAL MIDWIVES BOARD.—A meeting of the Central Midwives Board was held at Caxton House, Westminster, on Oct. 6th, with Sir Francis Champneys in the chair. A letter was considered from the medical staff of the Royal Derby and Derbyshire Nursing Institution as to the suspension of the institution as a training school for midwives. It was announced that the chairman, after an interview with Dr. F. R. Cassidi, one of the medical staff of the Royal Derby and Derbyshire Nursing Institution, had reported that the institution had been since July 28th in a position to train pupils according to the rules of the Board. It was decided that the report of the chairman be adopted. Letters (addressed to the chairman) were read from Mrs. Dugdale of Meeson Hall, Wellington, Salop, as to the subsiding of midwives in sparsely populated rural districts. Mrs. Dugdale wished to ascertain whether steps were to be taken in the near future by the State to subsidise midwives in sparsely populated districts. She gave details of the difficulties encountered in raising money for the maintenance of nurses, and stated that after 12 years' experience she found it impossible to collect the necessary funds, and she was forced to the conclusion that a State subsidy was the only means of getting over the difficulty. In her opinion the money required should not be left to individuals to provide. The chairman stated he had written to Mrs. Dugdale saying what the Central Midwives Board had done in sympathy with this movement. Mrs. Dugdale, in replying, said her object was to emphasise the necessity for helping midwives to make a living in sparsely populated districts, otherwise the midwives must make for the towns. In the country parts known to Mrs. Dugdale the medical men had never failed when called upon for help. The Board decided that copies of the previous resolutions on the subject be sent to Mrs. Dugdale. A letter was received from Miss Bernard-Boyce, inspector of midwives for Norfolk, stating that the local supervising authority for that county had now determined

that in no case should a period of suspension of a midwife exceed the term of seven days. An application from the Norwich Maternity Charity to hold the written examination locally at Norwich was considered. The Board decided that it be not granted for the present and that the applicants be informed that they may renew their application when there is a prospect of a larger number of candidates.

UNIVERSITY COLLEGE, LONDON.—The following awards of entrance scholarships and exhibitions to the Faculty of Medical Sciences at University College, London, have been made: Bucknill Scholarship and First Medical Exhibition (value of 190 guineas), divided equally between Mr. W. A. E. Karunaratne and Mr. C. J. H. Sharp. Second Medical Exhibition (value of 55 guineas), Mr. H. A. Fawcett; *proxime accessit*, Mr. E. A. L. Sansom. Epsom Scholarship, Mr. H. Ll G Hughes.—The Page May Memorial Lectures in Physiology will be delivered at the College on the following Mondays and Tuesdays at 4.30 P.M.: Oct. 24th and 25th, Nov. 7th, 8th, 28th, and 29th. The first course dealing with Neurology will be delivered by Professor C. S. Sherrington of the University of Liverpool. A syllabus can be obtained on application to the secretary of University College.

SEVENTEENTH INTERNATIONAL CONGRESS OF MEDICINE.—A meeting of the General Committee of this Congress was held on Wednesday, Oct. 12th, in the library of the Royal College of Physicians of London, under the Presidency of Sir Thomas Barlow. It will be remembered that an advisory board was appointed on Feb. 7th to nominate the officers of the Congress. The report of this board was put before a representative meeting, with the result that Sir Thomas Barlow was elected President, and Dr. W. P. Herringham Secretary. Both elections, made on the proposal of the advisory board, were unanimous. Sir Thomas Barlow, in returning thanks for his election, owned that he wished that he could have escaped the grave responsibility, while Dr. Herringham pointed out to the meeting how enormously he and all interested in the Congress were indebted to the work and zeal of Mr. D'Arcy Power, formerly secretary to the general committee. The advisory board had proposed "that there should be two Treasurers of the Congress, of whom one should be a layman of high financial position, and the other an eminent medical man." The principle of two treasurers was adopted by the meeting, but it was resolved that both should be medical men. The nomination by the board as one of these treasurers of Mr. G. H. Makins was unanimously adopted; the choice of the second treasurer will be made by the executive committee. A large organising committee was then formed by resolution, with directions to select a small executive committee.

## BOOKS, ETC., RECEIVED.

ALEXANDER (VAN) AND CO., 31, Craven-street, London, W.C.
Radio-activity. A Brief Guide to its Use in General and Specialist Practice. Compiled by Guy Stephen, D.P.H.Lond., Officier de Santé (France). Price 1s.

ARNOLD, EDWARD, London.
Glaucoma. An Inquiry into the Physiology and Pathology of the Intra-ocular Pressure. By Thomson Henderson, M.D. Price 10s. 6d. net.

BAILLIÈRE, TINDALL, AND COX, London.
Hæmoglobinuria. By Ambrose E. L. Charpentier, M.D. Durham, D.P.H. R.C.P. & S., L.R.C.P. Lond. Price 3s. 6d. net.

BALE (JOHN), SONS, AND DANIELLSSON, LIMITED, London.
Reports from the Clinical and Research Laboratories, St. George's Hospital, London, 1910. Price 5s. net.

BELL, G., AND SONS, LIMITED, London.
The Chained Titan. A Poem of Yesterday and To-day. By W. G. Hole. Price 4s. 6d. net.
The Inherent Law of Life. A New Theory of Life and of Disease. By Franz Kleinschrod, M.D. Kur-Arzt, Wörishofen. Translated from the German and edited by Louise C. Appel, F.T.S., B.Sc., M.B., B.S. Lond. Price 3s. 6d. net.

BLACK, ADAM AND CHARLES, London.
The First Principles of Heredity. By S. Herbert, M.D. Viennas M.R.C.S. Eng., L.R.C.P. Lond. Price 5s. net.

BLACKIE AND SON, LIMITED, London, Glasgow, and Bombay.
The Public Milk-supply. By Hugh A. Macewen, M.B., Ch.B. Glas., D.P.H. Lond., D.P.H. Cantab. Price 2s. 6d. net.

CHATTO AND WINDUS, London.
The Airy Way. By George A. B. Dewar. Price 6s. net.

CHURCHILL, J. AND A., London.
The Principles and Practice of Medical Jurisprudence. By the late Alfred Swaine Taylor, M.D., F.R.S., F.R.C.P. Lond. Sixth Edition. Edited, revised, and brought up to date by Fred. J. Smith, M.A., M.D. Oxon., F.R.C.P. Lond., F.R.C.S. Eng. In two volumes. Price £2 2s. net.
Hernia, its Cause and Treatment. By R. W. Murray, F.R.C.S. Price 6s. net.

CONSTABLE AND CO., LIMITED, London. (HOUGHTON MIFFLIN COMPANY, Boston and New York.)
Conquering Consumption. By Woods Hutchinson, A.M., M.D. Price 4s. 6d. net.

CORNISH BROTHERS, LIMITED, Birmingham.
The Medical Inspection of School Children and After. An Address given by Miss M. C. Matheson at the Annual Meeting of the Birmingham Charity Organisation Society, April 19th, 1910. Price 2d.
The Physiology and Hygiene of Sleep. By David Fraser Harris, M.D., C.M., B.Sc. Lond., F.R.S.E. Price 3d. net.

FISCHER, GUSTAV, Jena.
Die Entwicklung des menschlichen Geistes. Ein Vortrag von Max Verworn, Bonn. Price M.1.
Handbuch der Gesamten Therapie. In Sieben Bänden. Herausgegeben von Dr. F. Penzoldt und Dr. R. Stintzing. Vierte umgearbeitete Auflage. Dreizehnte Lieferung und Vierzehnte & fünfzehnte Lieferung. Price M.4.50.
Handbuch der Vergleichenden Physiologie. Herausgegeben von Hans Winterstein in Rostock. Neunte Lieferung. Band II. Physiologie des Stoffwechsels. Physiologie der Zeugung. Erste Hälfte. Price M.5. Zehnte Lieferung. Band III. Physiologie der Energieproduktion. Physiologie der Form. Zweite Hälfte. Price M.5.
Operative Chirurgie der Harnwege. Normale Anatomie und chirurgische pathologische Anatomie. Von J. Albarran, Paris. Ins Deutsche übertragen von Dr. Emil Grunert. Zweite Lieferung. Price M.8.
Die Atmungsreaktion des Herzens und ihre Verwendbarkeit bei der klinischen Prüfung der funktionellen Leistungsfähigkeit des Herzens. Von San.-Rat Dr. Ehrenfried Albrecht in Bad Oeynhausen. Price M.5.
Studien und Fragen zur Entzündungslehre. Von Dr. Herm. Schridde. Price M.1.40.
Uber traumatische Entstehung innerer Krankheiten. Klinische Studien mit Berücksichtigung der Unfall-Begutachtung. Von Dr. Richard Stern. Zweite neu bearbeitete Auflage. Zweites Heft. Krankheiten der Lungen und des Brustfells. Price M.2.

FROWDE, HENRY, AND HODDER AND STOUGHTON, London.
Oxford Medical Publications. A Handbook of the Surgery of Children. By E. Kirmisson, Professor of the University of Paris. Translated by J. Keogh Murphy, M.C. Cantab., F.R.C.S. Price 20s. net.
Oxford Medical Publications. A System of Syphilis. In six volumes. Edited by D'Arcy Power, M.B. Oxon., F.R.C.S., and J. Keogh Murphy, M.C. Cantab., F.R.C.S. With an Introduction by Sir Jonathan Hutchinson, F.R.S. Vol. VI. Price £2 2s. net per volume; or to subscribers £10 10s. net per set of six volumes.

GOVERNMENT CENTRAL BRANCH PRESS, Simla.
Paludism. Being the Transactions of the Committee for the Study of Malaria in India. Edited by Major S. P. James, M.D., I.M.S., Secretary to the Committee. No. 1. July, 1910. Price not stated.

HARPER AND BROTHERS, London and New York.
The Brain and the Voice in Speech and Song. By F. W. Mott, F.R.S., M.D., F.R.C.P. Price, cloth, 2s. 6d. net; leather, 3s. 6d. net.

HARRISON (HENRY) COMPANY, THE, 70, Linden-street, Brooklyn, New York. BAILLIÈRE, TINDALL, AND COX, London.
A Manual of Toxicology. By Albert H. Brundage, A.M., M.D., Phar.D., M.S. Seventh edition, revised. Price $1.50 net (postage prepaid). With coloured pathological plates, $2.00.

HODDER AND STOUGHTON, London.
Is That Lamp Going Out? By the Author of "Where's Master?" Price 1s. net.

INSTITUT OSWALDO CRUZ, Caisse postale, 926, Manguinhos, Rio de Janeiro.
Memorias do Instituto Oswaldo Cruz. Tomo II. Faciculo I. Abril de 1910. Price not stated.

KIMPTON, HENRY, London. (STENHOUSE, ALEXANDER, Glasgow.)
The Care of Children from Babyhood to Adolescence. For the Use of Mothers and Nurses. By Bernard Myers, M.D., C.M., M.R.C.S., L.R.C.P., L.M. With a Preface by George F. Still, M.A., M.D., F.R.C.P. Second edition, revised and enlarged. Price, paper, 1s. 6d. net; cloth, 2s. 6d. net.

LEWIS, H. K., London.
The Sexual Disabilities of Man and their Treatment. By Arthur Cooper, Consulting Surgeon to the Westminster General Dispensary. Second edition, revised and enlarged. Price 5s. net.

LONGMANS, GREEN, AND CO., London, New York, Bombay, and Calcutta.
The Essentials of Histology, Descriptive and Practical. For the Use of Students. By E. A. Schäfer, M.D., Sc.D., LL.D., F.R.S. Eighth Edition. Price 10s. 6d. net.
Crime and Criminals, 1876–1910. By R. F. Quinton, M.D., Late Governor and Medical Officer of H.M. Prison, Holloway. Price 4s. 6d. net.
Notes on Physiology. By Henry Ashby, M.D. Lond., F.R.C.P. Eighth edition. Revised by Hugh T. Ashby, B.A., M.B., B.C. Camb., M.R.C.P. Lond. Price 5s.

MACMILLAN AND CO., LIMITED, London.
Laboratory Notes on Organic Chemistry. For Medical Students. By Paul Haas, D.Sc., Ph.D. Price 2s. 6d. net.

# Appointments.

*Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to* THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

CORKERY, THOMAS HERBERT, L.R.C.P. Edin., L.F.P.S. Glasg., has been appointed Assistant School Medical Officer for the Plymouth Division by the Devon Education Committee.

EVANS, A. J., F.R.C.S. Edin., M.R.C.S., L.R.C.P. Lond., has been appointed Visiting Surgeon to the Liverpool Workhouse Hospital.

EVANS, R. J., M.R.C.S., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Pwllheli District of the county of Carnarvon.

JOHNSON, P., L.R.C.P. & S. Edin., L.F.P.S. Glasg., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Hatherleigh District of the county of Devon.

MACLENNAN, ALEXANDER, M.B., C.M. Glasg., has been appointed Assistant Surgeon to the Western Infirmary, Glasgow.

SHORT, LATIMER J., B.S., M.D. Lond., has been appointed Clinical Assistant at the Royal Hospital for Diseases of the Chest.

THOMSON, A. B. M., M.B., Ch.B. Edin., has been appointed Assistant Medical Officer to the Dundee School Board.

THOMSON, C. B., F.R.C.S. Eng., L.R.C.P. Lond., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Wimborne District of the county of Dorset.

WILTSHIRE, HAROLD W., M.D. Cantab., M.R.C.P. Lond., has been appointed Assistant Physician to King's College Hospital.

# Vacancies.

*For further information regarding each vacancy reference should be made to the advertisement (see Index).*

BIRMINGHAM AND MIDLAND EAR AND THROAT HOSPITAL, Edmund-street.—House Surgeon for six months. Salary at rate of £70 per annum, with board, lodging, and washing.

BOLINGBROKE HOSPITAL, Wandsworth Common, S.W.—Two House Surgeons for six months. Salary at rate of £75 per annum, with board and residence.

BOLTON INFIRMARY AND DISPENSARY.—Junior House Surgeon. Salary £100 per annum, with apartments, board, and attendance.

BRIGHTON, HOVE, AND PRESTON DISPENSARY.—Resident Medical Officer, unmarried. Salary £160 per annum, with rooms, coals, gas, and attendance.

BRISTOL, COSSHAM MEMORIAL HOSPITAL, Kingswood.—House Surgeon.

BRISTOL ROYAL INFIRMARY.—House Surgeon. Salary £100 per annum, with apartments, board, and laundry. Also Dental House Surgeon. Salary £100 per annum.

BURNLEY, COUNTY BOROUGH OF.—Assistant Medical Officer of Health. Salary £250 per annum.

BURY ST. EDMUNDS, WEST SUFFOLK GENERAL HOSPITAL.—Locum Tenens House Surgeon.

CARDIFF INFIRMARY (GENERAL HOSPITAL).—House Surgeon for six months. Salary £30, with board, residence, and laundry.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.—Registrars. Also Clinical Assistants.

CHELTENHAM GENERAL HOSPITAL.—House Physician, unmarried. Salary £75 per annum, with board and lodging. Also Surgeon-in-Charge for Branch Dispensary. Salary £80 per annum, with board and lodging.

CHESTERFIELD AND NORTH DERBYSHIRE HOSPITAL.—House Physician. Salary £60 per annum, with board, apartments, and laundry.

COLCHESTER, ESSEX COUNTY HOSPITAL.—House Surgeon, also House Physician. Salary in each case £80 per annum, with board, washing, and residence.

COUNTY OF LONDON CENTRAL DISTRICT.—Coroner. Salary £1250 a year.

DENBIGH, NORTH WALES COUNTIES ASYLUM.—Medical Superintendent. Salary £500 per annum, with house, &c.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Senior House Surgeon. Salary £100 per annum, with board and lodging. Also Assistant House Surgeon for six months. Salary at rate of £50 per annum, with board, lodging &c.

DOUGLAS, NOBLE'S ISLE OF MAN GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon, unmarried. Salary £90 per annum, with board and washing.

DUBLIN, DR. STEEVENS' HOSPITAL.—Honorary Anæsthetist.

FRENCH HOSPITAL, 172, Shaftesbury-avenue, W.C.—Resident Medical Officer, unmarried. Salary £50 per annum, with board and laundry.

GLASGOW DISTRICT ASYLUM, Woodilee, Lenzie.—Assistant Medical Officer. Salary £125 per annum, with board, lodging, washing, &c.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway, N.—Surgeon.

GUILDFORD, ROYAL SURREY COUNTY HOSPITAL.—Assistant House Surgeon. Salary £50, with board, residence, and laundry.

HALIFAX UNION POOR-LAW HOSPITAL.—Resident Medical Officer. Salary £110 per annum, with apartments, rations, and washing.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—Assistant House Surgeon. Salary £50 per annum, with rooms, board, and washing.

IPSWICH, BOROUGH OF.—Assistant Medical Officer of Health. Salary £250 per annum.

KING EDWARD VII. SANATORIUM, Midhurst, Sussex.—Junior Assistant Medical Officer, unmarried. Salary £150 per annum, with board, lodging, and attendance.

LISCARD, WALLASEY DISPENSARY AND VICTORIA CENTRAL HOSPITAL, Cheshire.—House Surgeon, unmarried. Salary £100 per annum, with apartments, board, attendance, &c.

LIVERPOOL MEDICAL MISSION.—Assistant Medical Officer. Salary £150 per annum.

LOUGHBOROUGH AND DISTRICT GENERAL HOSPITAL AND DISPENSARY.—Resident House Surgeon. Salary £100 per annum, with rooms, attendance, board, and washing.

MANCHESTER, ANCOATS HOSPITAL.—Assistant House Surgeon. Salary £70 per annum, with board, &c.

MANCHESTER ROYAL INFIRMARY.—Medical Officer for six months. Salary at rate of £100 per annum, with board and residence.

MARGATE, ROYAL SEA BATHING HOSPITAL FOR SURGICAL TUBERCULOSIS.—Resident Surgeon. Salary at rate of £80 per annum, with board and residence.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood.—Honorary Dental Surgeon.

NEW HOSPITAL FOR WOMEN.—Two House Surgeons, Senior Assistant and a Clinical Assistant for Ophthalmic Department, and Clinical Assistant for Tuesdays (all females).

NEWCASTLE-UPON-TYNE CITY ASYLUM, Gosforth.—Junior Assistant Medical Officer, unmarried. Salary £140 per annum, with apartments, board, and laundry.

NORWICH CITY ASYLUM, Hellesdon-next-Norwich.—Assistant Medical Officer, unmarried. Salary £150 per annum, with rooms, board, and laundry.

NORWICH, NORFOLK AND NORWICH HOSPITAL.—Assistant House Surgeon for six months. Salary £20, with board, lodging, and washing.

PADDINGTON GREEN CHILDREN'S HOSPITAL, London, W.—Honorary Dental Surgeon.

PENDLEBURY, MANCHESTER CHILDREN'S HOSPITAL.—Visiting Surgeon. Salary £100 per annum.

PRESTON ROYAL INFIRMARY.—Senior and Junior House Surgeons, unmarried, for six months. Salaries £80 and £60 per annum, with board, residence, and washing.

PRINCE OF WALES'S GENERAL HOSPITAL, Tottenham, N.—Honorary Assistant Surgeon. Also Junior House Surgeon and Junior House Physician for six months. Salary £40 per annum in each case, with board, residence, and laundry.

QUEEN'S HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Assistant Physician. Also Assistant Surgeon.

ROYAL GENERAL DISPENSARY, 25 and 26, Bartholomew Close, E.C.—Physician. Salary £40 per annum.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, London, E.C.—Resident Medical Officer for six months. Salary at rate of £120 per annum, with board, lodging, and washing.

ROYAL NATIONAL ORTHOPÆDIC HOSPITAL.—Resident House Surgeon, unmarried, for six months. Salary £100, with board, residence, and washing.

ROYAL NAVAL MEDICAL SERVICE.—Fifteen Commissions.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL, King William-street, West Strand, W.C.—House Surgeon. Salary at rate of £50 per annum, with board, residence, and laundry. Also Pathologist and Curator. Salary £50 per annum.

ST. ALBANS, HERTS COUNTY ASYLUM, Hill End.—Junior Assistant Medical Officer. Salary £150 per annum, with board, lodging, washing, &c.

ST. MARY'S HOSPITAL, Paddington, W.—Casualty Physician. Salary £75 per annum.

ST. MARY'S HOSPITAL FOR WOMEN AND CHILDREN, Plaistow, E.—Senior Resident Medical Officer, unmarried. Salary at rate of £100 per annum, all found.

SCARBOROUGH HOSPITAL AND DISPENSARY.—Junior House Surgeon for six months. Salary £30 per annum, with board, residence, and laundry.

SHEFFIELD ROYAL HOSPITAL.—Assistant House Physician, unmarried. Salary £50 per annum, with board, lodging, and washing.

STAFFORD, STAFFORDSHIRE GENERAL INFIRMARY.—Assistant House Surgeon. Salary £32 per annum, with board, residence, and laundry.

TEIGNMOUTH HOSPITAL, South Devon.—House Surgeon. Salary £30 per annum, with board, lodging, and laundry.

TIVERTON INFIRMARY AND DISPENSARY.—House Surgeon and Dispenser. Salary £30 per annum, all found.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Physician for Diseases of Women. Also Anæsthetist.

WESTMINSTER GENERAL DISPENSARY, 9, Gerrard-street, Soho, W.—Resident Medical officer. Salary £120 per annum, with rooms, gas, coal, &c.

WESTMINSTER HOSPITAL.—Medical Officer in charge of Electrical Department. Salary £120 per annum.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—House Surgeon for six months. Salary £30 per annum, with board, rooms, and laundry.

# Births, Marriages, and Deaths.

## BIRTHS.

KILLICK.—On Oct. 7th, at Trinity House, Maidstone, the wife o Charles Killick, M.D., F.R.C.S., of a son.

POLLARD.—On Oct. 4th, at Harpur-place, Bedford, the wife of H. Dean Pollard, M.B., B.S., F.R.C.S., of a son.

## MARRIAGES.

HAWKSLEY—BENSON.—On Oct. 7th, at Deeping St. Nicholas Parish Church, Lincolnshire, by the Rev. W. M. Benson, assisted by the Rev. S. Skene and the Rev. E. P. Cook, M.A., Walter Linney Hawksley, of Liverpool, eldest son of the late Dr. and Mrs. Hawksley, of Southport, to Annie Gertrude, youngest daughter of the Rev. and Mrs. W. M. Benson, Deeping St. Nicholas.

UPCOTT-GILL—BIRT.—On Oct. 4th, at St. Etheldreda's, Hatfield, Herts, Geoffrey A. Upcott-Gill, F.R.C.S., to Constance Mary, only daughter of Sir William and Lady Birt.

## DEATHS.

FRASER.—On Oct. 7th, at Borthwickbrae, Hawick, N.B., suddenly, Frederick William Dyce Fraser, M.D., aged 55 years.

LEAF.—On the 5th inst., at Eastbourne, Cecil Huntington Leaf, F.R.C.S., of 75, Wimpole-street, W., son of the late Frederick H. Leaf, of Streatham.

*N.B.—A fee of 5s. is charged for the Insertion of Notices of Births, Marriages, and Deaths.*

# Notes, Short Comments, and Answers to Correspondents.

## "IMITATIVE SUICIDE."

THE subject of imitative suicide has recently attracted attention in the public press. The mental condition of an individual who commits suicide is difficult to fathom. In one class of case a person will fancy that he is being constantly persecuted, that he is always watched, or that he is financially ruined—all these ideas being contrary to fact; he destroys himself in order to escape these imaginary evils. Such a man is obviously of unsound mind. In another class of case a man has committed a crime or disgraced himself in some way, and in order to free himself from the consequences of his act he takes his own life in preference to facing exposure or the punishment entailed. Such an individual is not necessarily insane. But there is yet another class—people who are subject to attacks of depression and who are apt to brood over real or imagined injuries. These are "weak-minded," or may be on the "border line" between sanity and insanity. Or another class likely to act upon some sudden impulse are the alcoholics. In these a passing suggestion is likely to result in some deed of violence often of a suicidal nature. Such impulses are susceptible of being spread by imitation. Reading in the newspaper of a mode of self-destruction which is likely to excite great notoriety has been known to induce a similar act in the reader; a suicide by coal-gas, especially when a description has been given of the exact manner in which the deed was carried out, has found imitators. More particularly, however, the sight of a particular spot or locality where previous suicides have taken place may induce a person, who may hitherto have been unsuspected of any such disposition, to destroy himself. Falls from heights especially come under this heading. Numerous suicides have taken place from the Suspension Bridge at Clifton. A writer in the *Yorkshire Evening News* has recently said that much harm is done by pictures and descriptions, and that imitative suicide may follow. We agree with him that the necessary suggestion may be evolved by such means. The suggestion may act on the conscious mind or the subconscious. Numerous instances are on record of alcoholics who have attempted to destroy themselves by throwing themselves from buildings and the like, and have subsequently retained no recollection of the event. The mere fact of being at a height suggested the act of throwing themselves over, and the action immediately followed the idea, as is so often the case in such individuals. These cannot always be considered as "imitative," but in some cases they are possibly of that nature.

## A QUESTION OF FEES.

*To the Editor of* THE LANCET.

SIR,—One so often hears the poor general practitioner accused by the "heads of the profession" of lacking in that nice conception of medical etiquette in his dealings with his professional brethren which obtains amongst the army of consultants that I am tempted to ask you to record a recent experience of mine at the hands of one of these superior persons.

As I was travelling by train in the provinces I had the misfortune to get a piece of grit from the engine impacted in my cornea. On arriving at one of our largest cities I found that the eye was causing me much pain, and was advised by a non-medical friend who knew the town to go to an ophthalmic dispensary near at hand. I went there, but found that the house surgeon was not resident and had left. The attendant directed me to the house of Dr. ——, who holds a position on the staff of the chief hospital in the city.

On being ushered into "the presence" I explained that I was a general practitioner from a neighbouring county, and, apologising for troubling him, asked him to remove the offending particle. He replied that it was no trouble, cocainised the eye, removed the grit, instilled atropine, and applied a bandage. I thanked him, and, though rather afraid of insulting him by the question, asked what was his fee. To my surprise he at once replied, "*One* guinea." The accent upon the numeral plainly intimated that this was a concession, and that had I been a layman the charge for this major operation would have been two at least. Not being an argumentative person, I paid at once and departed, "shaking the dust from off my feet as a testimony against him."

I am confident that no general practitioner would have made any charge for similar services rendered to a professional brother, whether a stranger or no. We may have our shortcomings, but we observe the old proverb, "Hawks don't pick out hawks' een," in treating our ailing brethren.

I am pleased to see from the "Medical Directory" that the operator lectures to the students of his hospital on ophthalmology and not on medical ethics.

I enclose my card and sign myself, yours faithfully,

Oct. 4th, 1910. M.B., F.R.C.S.

## HEALTH IN WEST AFRICA.

IN our issue of Oct. 1st, p. 1053, we published an abstract of the report to the Colonial Office on Health and Sanitation in Sierra Leone in which was noted the great improvement in sanitation that is taking place in our West African colonies. We have now received the *West African Annual* for the year 1910 which contains the record of a journey to Liberia and our colonies at Sierra Leone, the Gold Coast, and Southern Nigeria made at the end of last year on behalf of the *African World*. By means of pen and camera an attempt is made to give the reader an idea of the developments now going forward in these colonies. Under the heading "The Health Factor and its Bearing on Economics" a well-deserved tribute is paid to the "measures which are due to Sir Patrick Manson, Major Ronald Ross, and Dr. the Hon. W. T. Prout, and the splendid band of men who have promulgated and enforced them throughout the whole length of British West Africa." In an interview at Lagos with Dr. J. Arthur Pickels some interesting information is given with regard to the health conditions at that place. These have greatly improved during recent years owing to the filling up of swamps, the methodical crusade against mosquitoes, the free distribution of quinine, and the more exact medical knowledge and better appreciation by laymen of the personal care of their health. Dr. Pickels points out that the mortality is markedly less than formerly in the large towns, that various comforts so useful to medical men when prescribing for an invalid are now easily obtainable, and that the sanitation of the town has greatly improved under the care of the municipal board, of which the principal medical officer, Mr. W. H. W. Strachan, C.M.G., is chairman. The making of good roads, which give free passages for fresh air, and the removal of cul-de-sacs and narrow winding lanes have also greatly helped towards healthier conditions. With regard to the native attitude towards European medical men, Dr. Pickels says that although there was at one time an attitude of suspicion and unwillingness to place themselves under treatment, the people are now beginning to take a more enlightened view. The native doctors having charge of the Government dispensaries in the town have helped to bridge over the feeling of distrust of the medical profession which formerly existed in the minds of the natives. In an interesting description of the Lagos Hospital it is stated that the institution is made up of a number of bungalows specially built on an island site, surrounded by a wall which makes the place quite a little village by itself. The European ward is situated in a stone bungalow which contains ten beds. One ward is used mainly for the military and the police, who are kept together for convenience in inspection by their own officers. Another ward for female natives contains eight beds. There is a completely equipped operating theatre, and the services of native female nurses are utilised in the hospital. The institution is a Government one and is open to everybody, but Europeans and natives able to afford it pay according to their means. The *Annual*, which is published by the African World, Limited, Throgmorton House, Copthall-avenue, London, E.C., at the price of 1*s*., contains a good map, is well illustrated, and supplies a great deal of useful information not only to those who intend to visit West Africa, but to those at home who wish to make themselves acquainted with the conditions of life in a not unimportant part of the British Empire.

## USEFUL DIARIES.

FROM the Cambridge University Press has come a useful little diary, the Cambridge Pocket Diary for 1910–1911, beginning, that is, in the last week in September of 1910, and running to September 30th, 1911, covering, therefore, the academical instead of the calendar year. The diary will easily go into the waistcoat pocket and costs only 1*s*. or can be obtained with a pencil and stamp pocket added for 2*s*. The same firm is also publishing a block-form diary of the academical year, each page of which contains seven days, the printed matter being arranged on the left hand half of the sheet, ample space being left on the right for manuscript notes for engagements.

## HEALTH IN THE TONGA OR FRIENDLY ISLANDS.

A PROTECTORATE over these islands, situated in the Southern Pacific, 390 miles to the East-south-east of Fiji, was proclaimed in May, 1900. According to the latest report received at the Colonial Office from the British Agent and consul, Mr. W. Telfer Campbell, the population at the end of 1909 was estimated at 21,958. In the year 1909 there were 293 births and 267 deaths. The most prevalent disease is yaws. Native children are expected to go through an attack as a matter of course. If a child be lucky enough to escape its relatives consider that it will not be healthy. Dysentery and enteric fever occur occasionally, but are not so prevalent as might be expected in view of the primitive sanitary arrangements. Cases of leprosy are scattered throughout the group. The question of setting an island apart for the segregation of lepers is receiving the attention of the Government. The Protectorate is free from malaria, but this is, unfortunately, not the case with tuberculous diseases, which are increasing. This increase is accounted for by the habits of the natives, and the practice, as elsewhere in the Pacific, of overclothing themselves with European clothing, which when wet through, is allowed to dry on the body and

is at night time or when the heat is felt frequently discarded. Epidemics are of comparatively rare occurrence. The provision made for sanitation so far has been inadequate, and the low-lying nature of most of the islands of the group renders the matter of drainage a difficult one. During eight months (April–December) of the year the climate is good for a tropical one. The remaining four months comprise what is known as the hurricane season, in which the weather is hot and humid with a good deal of rain. The climate is not suitable for Europeans to perform hard manual labour in for any length of time. There is a hospital established at each of the three head centres in the group. Each is under a resident European medical officer. The benefits to be derived from these establishments are unfortunately not fully availed of by the Tongans. The latent faith in native pharmacy causes modern remedies and methods to be treated, as far as possible, with doubt if not with contempt. The civilisation of Tonga will have to be much deeper than it is before the natives can properly appreciate modern medical science and the services of its votaries. The senior medical officer at Tonga is Dr. C. E. Maguire.

*E. D. C.*—Such a circular note of professional qualifications and attainments should not, of course, be distributed to lay people in any broadcast fashion. Probably our correspondent would not have heard anything of the matter if his critic had known that only 10 or 12 patients had received the circular.

**COMMUNICATIONS** not noticed in our present issue will receive attention in our next.

## A DIARY OF CONGRESSES.

THE following Congresses, Conferences, and Exhibitions are announced for 1910:—

Oct. 16th–22nd (Barcelona).—First International Spanish Congress of Tuberculosis.
Nov. 7th–12th (Cape Town).—Twelfth South African Medical Congress (1910).

In 1911:—
May–October (Dresden).—International Hygiene Exhibition.
June and July (Romford).—Town Planning and Modern House and Cottage Exhibition.
July (Birmingham).—British Medical Association.
August or September (Berlin).—Third International Laryngo-Rhinological Congress.
September (Brussels).—Exhibition of Fractures.
September (Sydney).—Australian Medical Congress.
Sept. 24th–30th (Rome).—International Congress on Tuberculosis.
" 25th–29th (Rome) Seventh International Congress of Dermatology and Syphilology.
October (Cologne).—International Congress of Criminal Anthropology.

In 1912:—
September (Washington, D.C.).—Fifteenth International Congress of Hygiene and Demography.

In 1913 the only fixture so far is in London, where the Seventeenth International Congress of Medicine will take place.

# Medical Diary for the ensuing Week.

## SOCIETIES.

**ROYAL SOCIETY OF MEDICINE, 15, Cavendish-square, W. (temporary address during building of new house).**

TUESDAY

THERAPEUTICAL AND PHARMACOLOGICAL SECTION (Hon. Secretaries—H. Charles Cameron, H. H. Dale): at 4.30 P.M.

*Presidential Address:*
Professor A. R. Cushny, F.R.S.: A Plea for the Study of Therapeutics.

PATHOLOGICAL SECTION (Hon. Secretaries—C. Bolton, J. C. G. Ledingham): at 8.30 P.M.

*Presidential Address:*
Dr. F. W. Mott, F.R.S.

THURSDAY.

DERMATOLOGICAL SECTION (Hon. Secretaries—H. G. Adamson, J. H. Sequeira) at 11, Chandos street, W.: at 5 P.M.

*Cases:*
Mr. J. E. R. McDonagh: Cases of Syphilis treated by "606."
Dr. A. Winkelried Williams: (1) Gonorrhœal Keratosis of Palms and Soles; (2) Ulcerating Scleroderma improving under Mercurial Inunction; (3) Epithelioma of Chin, Simulating Actinomycosis.
Dr. H. G. Adamson: Atrophia Maculosa Cutis.

FRIDAY.

OTOLOGICAL SECTION (Hon. Secretaries—H. J. Marriage, Sydney Scott) at 11, Chandos-street, W.: at 5 P.M.

*Discussion:*
On Syphilis in Relation to Otology (to be opened by Mr. Arthur Cheatle, President of the Section).

ELECTRO-THERAPEUTICAL SECTION (Hon. Secretaries—Reginald Morton, G. Harrison Orton): at 8.30 P.M.

*Paper:*
Dr. Franz Nagelschmidt: The Thermic Effects produced by High Frequency Currents, and the Therapeutical Uses of Diathermic Treatment.

**ROYAL MICROSCOPICAL SOCIETY, Doré Gallery, 35, New Bond-street, W.**

WEDNESDAY.—8 P.M., The President will read a paper by Mr. J. J. Simpson: Hicksonella, a New Gorgonellid Genus.—Mr. E. M. Nelson: (1) Resolution of New Detail in a Coscinodiscus Asteromphalus; (2) A Micrometric Difficulty. Exhibition of Pond Life.

**OPHTHALMOLOGICAL SOCIETY OF THE UNITED KINGDOM, 11, Chandos-street, Cavendish-square, W.**

FRIDAY.—8 P.M., Card Specimens will be shown by Dr. C. Markus, Mr. G. W. Roll, and Mr. C. Blair. Mr. G. Coats will read a Paper.

**SOCIETY OF TROPICAL MEDICINE AND HYGIENE, 11, Chandos-street, Cavendish-square, W.**

FRIDAY.—8.30 P.M., Dr. A. G. Bagshawe: Recent Advances in our Knowledge of Sleeping Sickness.

## LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

**ROYAL COLLEGE OF PHYSICIANS OF LONDON, Pall Mall East.**

TUESDAY—4 P.M., Dr. H. B. Donkin: Harveian Oration.

**ROYAL COLLEGE OF SURGEONS OF ENGLAND, Lincoln's Inn Fields, W.C.**

FRIDAY.—5 P.M., Prof. A. Keith: Specimens illustrating Obstruction of the Bowel caused by (1) Defects of the Diaphragm; (2) Peritoneal Pockets; (3) Imperfect Attachment of the Mesentery. (Museum Demonstration.)

**MEDICAL GRADUATES' COLLEGE AND POLYCLINIC, 22, Chenies-street, W.C.**

MONDAY.—4 P.M., Dr. C. Fox: Clinique (Skin). 5.15 P.M., Lecture:—Dr. G. Oliver: Some Bedside Clinical Methods (with demonstrations).
TUESDAY.—4 P.M., Dr. P. Stewart: Clinique (Medical). 5.15 P.M., Lecture:—Dr. R. C. Hort: Diagnosis and Treatment of Gastric and Duodenal Ulcer (continued).
WEDNESDAY.—4 P.M., Mr. D. C. L. Fitzwilliams: Clinique (Surgical). 5.15 P.M., Lecture:—Mr. A. W. M. Robson: Certain Points in Diagnosis and Treatment arising out of his last 150 Operations for Duodenal Ulcer.
THURSDAY.—4 P.M., Mr. J. J. Clarke: Clinique (Surgical). 5.15 P.M., Lecture:—Dr. J. F. H. Daly: Respiration in Health and Disease.
FRIDAY.—4 P.M., Dr. A. McNab: Clinique (Eye).

**POST-GRADUATE COLLEGE, West London Hospital, Hammersmith-road, W.**

MONDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 12 noon: Pathological Demonstration:—Dr. Bernstein. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Dunn: Glaucoma, its Varieties and Treatment.
TUESDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. 11.30 A.M.: Demonstration in Minor Operations. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. G. Stewart: The Diagnosis of Functional and Organic Disorders of the Nervous System (Lecture I.).
WEDNESDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. 12.15 P.M., Lecture: Dr. G. Stewart: Practical Medicine. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Mr. B. Harman: Diseases of the Eye. 2.30 P.M., Dr. Robinson: Diseases of Women. 5 P.M., Lecture:—Dr. G. Stewart: The Diagnosis of Functional and Organic Disorders of the Nervous System. (Lecture II.).
THURSDAY.—10 A.M., Surgical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. 2.30 P.M., Mr. Dunn: Diseases of the Eye. 5 P.M., Lecture:—Mr. Baldwin: Practical Surgery (Lecture II.).
FRIDAY.—10 A.M., Dr. Robinson: Gynæcological Operations. Medical Registrar: Demonstration of Cases in Wards. 2 P.M., Medical and Surgical Clinics. X Rays. Operations. Dr. Davis: Diseases of the Throat, Nose, and Ear. 2.30 P.M., Dr. Abraham: Diseases of the Skin. 5 P.M., Lecture:—Dr. Abraham: Cases of Skin Disease
SATURDAY.—10 A.M., Dr. Saunders: Diseases of Children. Dr. Davis: Operations of the Throat, Nose, and Ear. Mr. B. Harman: Diseases of the Eye. 2 P.M., Medical and Surgical Clinics. X Rays. Operations.

**LONDON SCHOOL OF CLINICAL MEDICINE, Dreadnought Hospital, Greenwich.**

MONDAY.—2 P.M., Operations. 2.15 P.M., Mr. Turner: Surgery. 3.15 P.M., Sir Dyce Duckworth: Medicine. 4 P.M., Mr. R. Lake: Ear and Throat. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. 2.15 P.M., Special Lecture:—Mr. W. Turner: Some Surgical Conditions of the Large Intestine.
TUESDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Wells: Medicine. 3.15 P.M., Mr. R. Carling: Surgery. 4 P.M., Sir M. Morris: Diseases of the Skin. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
WEDNESDAY.—2 P.M., Operations. 2.15 P.M., Dr. F. Taylor: Medicine. 3.30 P.M., Mr. Cargill: Ophthalmology. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.
THURSDAY.—2 P.M., Operations. 2.15 P.M., Dr. G. Rankin: Medicine. 3.15 P.M., Sir W. Bennett: Surgery. 4 P.M., Dr. Sale-Barker: Radiography. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Ear and Throat. Special Lecture:—2.15 P.M., Dr. G. Rankin: Endocarditis.
FRIDAY.—2 P.M., Operations. 2.15 P.M., Dr. R. Bradford: Medicine. 3.15 P.M., Mr. McGavin: Surgery. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 12 noon, Skin.
SATURDAY.—2 P.M., Operations. Out-patient Demonstrations:—10 A.M., Surgical and Medical. 11 A.M., Eye.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC, Queen-square, Bloomsbury, W.C.

TUESDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Buzzard: Myasthenia Gravis.

FRIDAY.—3.30 P.M., Clinical Lecture:—Dr. F. Buzzard: Myelitis.

CENTRAL LONDON THROAT AND EAR HOSPITAL, Gray's Inn-road, W.C.

TUESDAY.—3.45 P.M., Lecture:—Dr. Atkinson: Pharynx and Naso-Pharynx.

FRIDAY.—3.45 P.M., Lecture:—Dr. Abercrombie: Clinical Cases.

ST. JOHN'S HOSPITAL FOR DISEASES OF THE CHEST, Leicester-square, W.C.

THURSDAY.—6 P.M., Chesterfield Lecture:—Dr. M. Dockrell: Eczema, its Varieties, Symptoms, and Causes.

HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Brompton, S.W.

WEDNESDAY.—4 P.M., Lecture:—Dr. Habershon: Bronchiectasis.

ANCOATS HOSPITAL, Manchester.

THURSDAY.—4.15 P.M., Dr. C. H. Melland: Some Conditions associated with Enlargement of the Lymphatic Glands. (Post-Graduate Clinic.)

## OPERATIONS.

### METROPOLITAN HOSPITALS.

**MONDAY (17th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M.), St. Mark's (2.30 P.M.), Central London Throat and Ear (Minor 9 A.M., Major 2 P.M.),

**TUESDAY (18th).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M., Ophthalmic, 2 P.M.), Tottenham (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

**WEDNESDAY (19th).**—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M., Dental, 2 P.M.), Tottenham (Ophthalmic, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

**THURSDAY (20th).**—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M. and 2 P.M.), Tottenham (Gynæcological, 2.30 P.M.), West London (2.30 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

**FRIDAY (21st).**—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), Tottenham (2.30 P.M.), St. Peter's (2 P.M.), Central London Throat and Ear (Minor, 9 A.M., Major, 2 P.M.).

**SATURDAY (22nd).**—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (10 A.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9 A.M. and 9.30 A.M.), West London (2.30 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

## EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITOR," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention should be given to this notice.

*It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.*

*Lectures, original articles, and reports should be written on one side of the paper only,* AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

*Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.*

*We cannot prescribe or recommend practitioners.*

*Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."*

*Letters relating to the publication, sale and advertising departments of* THE LANCET *should be addressed "To the Manager."*

*We cannot undertake to return MSS. not used.*

## MANAGER'S NOTICES.

### TO SUBSCRIBERS.

WILL Subscribers please note that only those subscriptions which are sent direct to the Proprietors of THE LANCET at their Offices, 423, Strand, London, W.C., are dealt with by them? Subscriptions paid to London or to local newsagents (with none of whom have the Proprietors any connexion whatever) do not reach THE LANCET Offices, and consequently inquiries concerning missing copies, &c., should be sent to the Agent to whom the subscription is paid, and *not* to THE LANCET Offices.

Subscribers, by sending their subscriptions direct to THE LANCET Offices, will insure regularity in the despatch of their Journals and an earlier delivery than the majority of Agents are able to effect.

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### TO COLONIAL AND FOREIGN SUBSCRIBERS.

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## METEOROLOGICAL READINGS.

*(Taken daily at 8.30 a.m. by Steward's Instruments.)*

THE LANCET Office, Oct. 12th, 1910.

| Date. | Barometer reduced to Sea Level and 32° F. | Direction of Wind. | Rain fall. | Solar Radio in Vacuo. | Maximum Temp. Shade. | Min. Temp. | Wet Bulb. | Dry Bulb. | Remarks. |
|---|---|---|---|---|---|---|---|---|---|
| Oct. 6 | 30·45 | N. | ... | 77 | 65 | 55 | 54 | 56 | Overcast |
| ,, 7 | 30·26 | E. | ... | 107 | 68 | 54 | 57 | 58 | Fine |
| ,, 8 | 29·96 | E. | ... | 88 | 63 | 57 | 56 | 58 | Cloudy |
| ,, 9 | 30·02 | N. | ... | 61 | 60 | 55 | 54 | 56 | Overcast |
| ,, 10 | 30·04 | S.W. | ... | 99 | 67 | 56 | 54 | 57 | Cloudy |
| ,, 11 | 29·82 | S.W. | ... | 87 | 67 | 56 | 58 | 59 | Cloudy |
| ,, 12 | 29·60 | N. | 0·25 | 51 | 51 | 51 | 50 | 51 | Overcast |

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